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approach

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AIRCREW COORDINATION

Habla "Air Wing"?

Editorial

By Capt. R.E. Joslin, USMC

WE aviators have unique expressions similar to those used by doctors, engineers and lawyers. However, because of the unforgiving nature of aviation, misunderstanding can lead to disaster. One accepted causal factor of a recent Class A mishap stated, "The crew chief's intention in using the command 'forward' was to move the aircraft along its longitudinal axis; conversely, the pilot perceived the 'forward' command to mean moving the aircraft forward along the concrete pad's centerline, which wasn't aligned with the aircraft's longitudinal axis. The net result was that during the landing phase the helicopter impacted a tower and rolled on its side."

Like any language, standardization, comprehension and fluency are maintained through constant practice. Granted, one misunderstanding does not necessarily lead to a mishap; it is merely a domino in the string of events preceding a mishap. However, by removing this one domino, we can effectively stop the string of events. As we can see, this use of English as a foreign language can be quite insidious and often cleverly disguised in words we really thought we understood. Here's a case in point: an accepted causal factor from a class B MIR. "The pilot in command and copilot had different definitions of a high hover." An out-of-ground-effect hover was attempted, and the aircraft settled with the main rotor striking a cactus, impacting the ground and rolling over on its side.

Another category is special mission prebriefed terms that are essential for brevity or tactical considerations, but are sometimes used in nonapplicable environments. Examples: "Tally ho! No tally!" instead of "Traffic in sight! Negative Contact!" These terms are probably understood by military controllers but could conceivably be misunderstood by civilian or foreign controllers with catastrophic results.

Then, of course, there is the "clicker." He is the person who acknowledges all transmissions with the proverbial two clicks of the microphone switch. This habit is fine for a briefed minimum-communication scenario, but otherwise what does it mean? "Does it mean I understood your transmission?" "I didn't hear you?" "I've got an itchy finger?" Or what?

By becoming fluent in our professional language, we can eliminate at least one potential mishap causal factor and rightfully say that we are at least "bilingual."

Capt. Joslin is a helicopter pilot currently serving a tour as the helicopter aerodynamics instructor for the Aviation Safety School located at the Naval Postgraduate School, Monterey Calif.

inside approach

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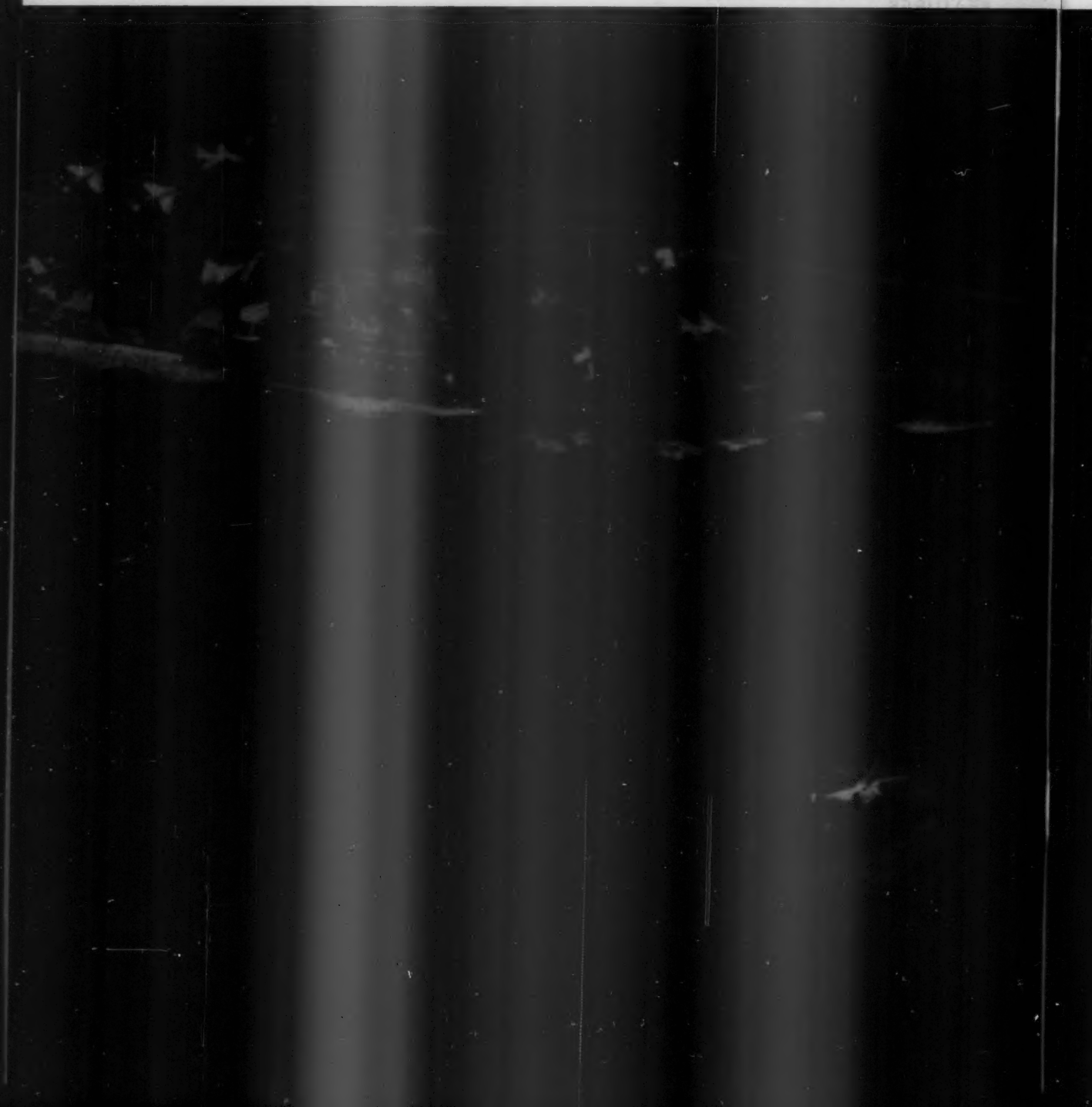
Occasionally an aircrewman finds himself tasked to pull a rose out of a can of worms. You can depend on luck when your turn comes, or you can train, practice, brief and drill until it becomes a matter of

Taking C



Care of Business

By Cdr. Paul A. DuVal

I SUPPOSE everybody has his own "hot rock" story, so here's mine. There I was, in a plane guard at 0420. We'd been out for about two hours taking our turn in an extend-ex (continuous, protracted cyclic ops) that had started some 20 hours before. My nugget copilot (so new he was still an ensign) had shown definite signs of understanding English since his arrival several weeks back. This is always useful when you need a checklist read.

Lately, he even seemed to know when to move which switch, so I let him fly around the block a few times. I was pretty confident; after all, I was a medium-flavored lieutenant, finishing up my second IO cruise. My first crewman was a first class petty

officer who was new to the unit, but he knew his stuff. The swimmer was an airman who had been with us several months and was progressing nicely toward first crew.

Shortly after our launch, we had checked out our Sea King's doppler radar, flight control coupler and hover trim. For the uninitiated, you must understand that H-3 crews routinely blast off on dark nights, level off at 150 feet above the drink, push a button on a 1950-vintage box of wires, lights and potentiometers, and let it fly hands-off down to zero knots and 40 feet.

The pilot then pushed another button, allowing the crewman (who was hanging out the cargo door) to take limited control of the aircraft and joystick it to the proper position. The idea was to kick the swimmer out the door and retrieve folks who had become separated from their former primary means of transportation. Since we had practiced this act numerous times before (and three times more that night without swimmer deployment just for good measure), I figured we were ready for center stage if the lights should come up.

Part of the mission that the go-fasters were on that night involved dropping flares for target illumination. They would drop them a few miles on the opposite side of the ship, lighting the cloudy night sky with a spooky kind of glow. No flares had been dropped for nearly half an hour, so I was surprised when the sky behind us lit up again as we started to turn on the arc. Besides, they didn't usually do that during a recovery, which was now in progress. The nugget was flying and doing just fine at 300 feet and 80 knots, so I looked back over my right shoulder to see the fireworks.

I'll never forget the empty, sick, anxious feeling in my gut when I saw that semicircular ball of flame coming from my ship's flight deck. I think all young helo pilots secretly hope that someday they will be in the "right" place at the "right" time when somebody's flying machine comes apart. In the moment when I saw that awesome sight, I knew I would gladly forever give up the chance to be a hero if it would have prevented that from happening.

I immediately took the controls and yanked the nose around toward the ship. I said in an agitated voice, but in perfect NATOPSese, "Rig for rescue, rig for rescue, there's a fire on the flight deck!"

I could tell by the commotion in the back end that the crewmen were hastily (and, it turned out, efficiently) preparing to do what they had trained so long and hard for.

"What's going on?" asked the first crewman.

"I don't know, but the whole flight deck is on fire!" I answered, trying to control the anxiety gripping me. I pushed it over the red line, and the radio crackled with a familiar voice.

"Angel, angel, where are you?"

"I'm two miles inbound, boss."

"Roger. Ninety-nine schoolboy, return to marshal, max conserve, max conserve."

As we got closer, I could see the flames along the entire length of the angled deck. I hoped they would be put out soon. If fuel and ordnance started to cook off, this would be extremely bad.

"Angel, I have two in the water about 200 yards on the port quarter. Close the ship, now!"

"Angel 6, roger."

Then to the nugget, "Standby for an alternate approach."

Isn't NATOPSese wonderful? It is, especially when your brain is so full of fleeting glimpses and fragments that it's a major effort using it to remember what comes next.

"Okay, gang, two guys in the water. We're coming up on them."

"Clearance across the stern, boss?"

"Yes, you're cleared across the stern. Can you see them yet?"

As we passed into the still bright light of the flight deck fire, I saw the steady rain falling around us.

"No, sir. Say surface winds."

"Roger, angel, stand by."

As we passed the stern 90 seconds after the crash, I breathed easier as the firefighters succeeded in dousing out the flames.

"Surface wind 018 at 16. You're almost over them."

As I peered into the misty-looking gloom, I realized the English-speaking nugget had been

. . . I'll never forget the empty, sick, anxious feeling in my gut when I saw that semicircular ball of flame coming from my ship's flight deck . . .

completing the pre-dip checks correctly, and that I had responded correctly to each item. And somewhere in there was the first crewman's report, "Rigged for rescue, swimmer standing by. Two short burners and one long burner, armed and ready."

I also glanced at my BDHI and determined the direction of turn and outbound heading if we found survivors. Love that NATOPS.

Suddenly I saw a beautiful sight. Although it was blurred and dim, I recognized the night end of a MK 13 signal flare not 50 yards ahead of us.

"Smoke's away!"

I turned left and rolled out on the teardrop. At the same time, the air boss told me we should be over them. I reported the MK 13 in sight.

"I have three good lights," the first crewman reported.

I timed for 10 seconds and just as I began the long loop back in, the nugget said, "Start your turn."

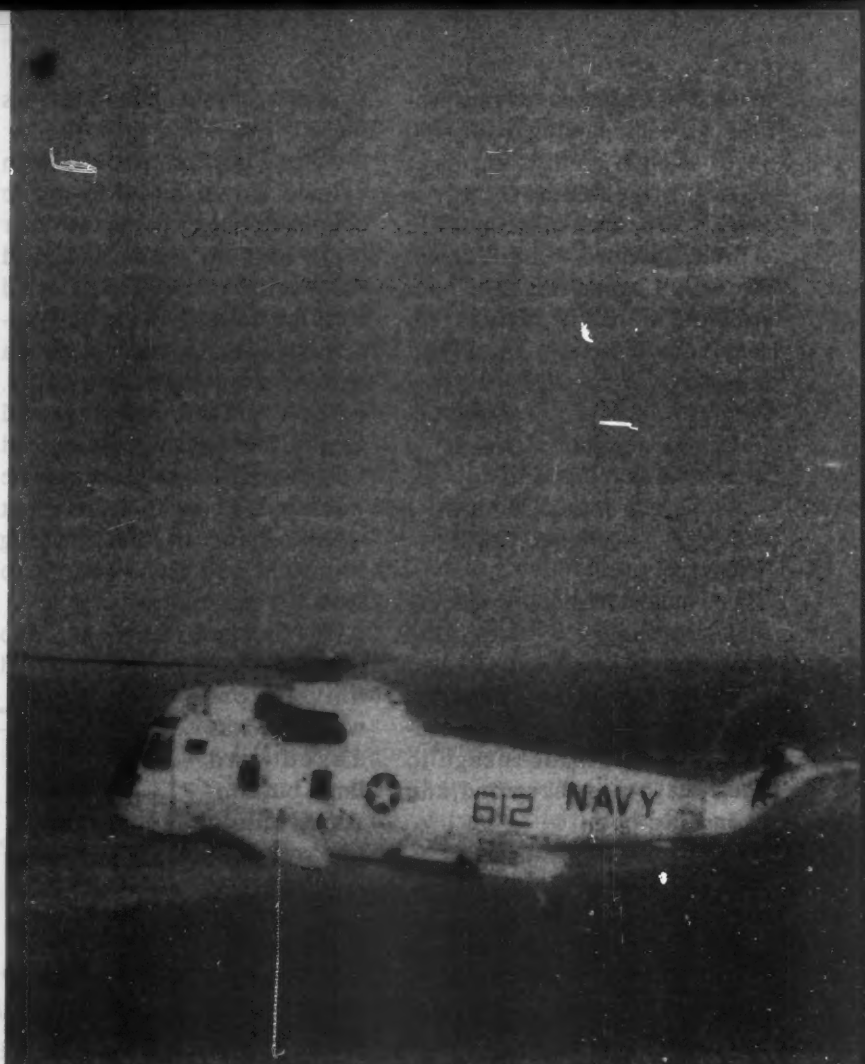
"Say, this guy's pretty sharp after all," I told myself.

As we rolled out on 018, I got steady and called, "Coupler."

"Engaged," the nugget said.

The bird started down as I trimmed the stick back. We were scanning and studying the gauges furiously, my hands poised to abort the approach, but she was flying the profile perfectly. I caught glimpses of the smoke markers and saw that we had a fair distance to go. The crewmen reported the smokes in sight and began verbal directions.

I figured I'll speed things up a bit by maintaining 30 to 40 knots groundspeed until we got closer. Big mistake. We sailed right by the smokes before I could slow to a hover. Now I had to either go



around or begin the tedious process of backing down for 100 yards at night on instruments at 40 feet. Since finding the guy is usually 90 percent of the battle in a SAR, I elected to back down, swearing I would not have been so stupid if I had to do this again sometime. The crewman still had one survivor in sight, and my doppler needles were working 4.0. Thank God the machine was doing what it was supposed to do!

As we got within 30 yards, I slowed to a hover and called, "Hover trim."

The nugget hesitated a second, then said, "Engaged." Only in the debrief later did I realize I had forgotten to tell him to engage the cyclic coupler first. Fortunately, he was smart enough to figure that out in one second, and he engaged both.

"I have a light," from the crewman.

"Roger, you have control."

The crewman asked for and I gave him flood and hover lights. He drove us the rest of the way rearward to the first survivor. We got the swimmer safely into the water and slid left to get him out of the rotor wash. Three minutes later the swimmer had the survivor free of his chute. He signaled and we moved back in for the pickup. The swimmer snapped the survivor to the hook, but just as he was about to hook himself, the coupler decided to go bananas.

By the time I regained control of the aircraft, the nose was 10 degrees up, the left wing was 10 degrees down, and we had descended to 20 feet. We were moving back and left at stampede speed and dropping fast. I got us back up to 40 and level, but we dragged the survivor across the swimmer, causing him to lose his mask.

After I got the first crewman calmed down and the cyclic coupler disengaged, the swimmer came back to the surface and signaled he was OK. He started stroking toward the other survivor, who had found a piece of a flap and was using it for flotation. In the light of our floods, I could see him looking at us. He seemed very patient and calm. Maybe he was having second thoughts about climbing aboard that bucking bronco he had been so happy to see a few minutes earlier.

The first crewman managed to get the first survivor aboard and moved forward. He was dazed and limp, but conscious, with no apparent injuries. I had to turn off my UHF mixer because the ship and air wing had their hands full getting gas for those who needed it and bingos for almost everyone.

...The swimmer snapped the survivor to the hook, but just as he was about to hook himself up, the coupler decided to go bananas...

Using my doppler needles and the first crewman's verbal directions, I flew the aircraft manually toward the swimmer and second survivor. Having learned my lesson about speeding things up, I took this move slowly. By the time we had rejoined the party, the swimmer had the second survivor ready, and we brought them both aboard with little difficulty.

With everyone inside and the door shut, we departed the hover. The survivors seemed in good shape even though shaken up. I insisted the crewmen keep them lying on the deck covered with blankets.

Then I made another mistake. In the rush of success and pride, I flipped on my UHF mixer and started talking, announcing that we had everybody and needed medical attention for the survivors. It had not occurred to me that anything could have been more important to the ship than my rescue. I was too embarrassed to realize that I was interfering with the air boss' efforts to take care of another aircraft with an emergency. I held my peace for a few seconds, then was cleared aboard without even having to ask. I said to the first crewman, "Tell Johnson he did a great job, and we'll be down to see him in a little while. We've got a few more birds to get aboard."

Our survivors and swimmer were taken below in litters (SOP), and we took on a fresh swimmer. While waiting for clearance to lift, I reminded the crew that the flight was not over. They had handled a tough job, but we couldn't yet relax. We returned to the plane guard, recovered those still holding, and came back.

Everybody congratulated us on the rescue. An officer from the country we were exercising with

had been on the bridge. I was told he had predicted, as the parachutes touched the water, that those men were as good as dead because the sharks would get them before we could. It felt great to pull it off, to find out for sure we could really do it.

Things worked out mainly because we had frequently briefed and practiced the exact procedures we used that night, including the completion of the pickup on manual control. I know I could not have done that had I not practiced it so many dozens of times before. Each of us knew the sequence because we also had briefed it thoroughly before every night plane guard, including this one. Even so, as well as we did, I still made several mistakes that could have been costly.

- I became impatient during the coupled approach, used too much groundspeed and overshot survivors. Not only did this delay the pickup and jeopardize our maintaining visual contact, it required me to back down a long way at night — a maneuver that makes even the best of us a little uneasy.
- I left out a step (a memory item) in the coupling procedure: switching the cyclic coupler to doppler. Had my copilot not been on the ball, this would have caused some confusion or disorientation as we tried to sort out why the hover trim would not engage.
- I guess "task fixation" is the quick explanation for my third goof. How could I forget there might be other guys up there in the goo with bigger problems than mine? Unless you're on the verge of ejection or ditching, listen before talking on the radio!

I was glad, too, to learn that I'd overcome a weakness of my formative aviator days. Even before it was fashionable, some astute eagles, greyer than I, pointed out that I wasn't very good at crew coordination. In fact, I didn't have much at all. Actually, I really didn't know what they were talking about, except that sometimes evolutions that should have been routine seemed to get all balled up.

In time, though, I learned that my crew's conformance to my desires bore an amazing correlation to how much I talked to them about what I wanted done. The more precise I was in the brief, the more frequently I updated the brief during the flight, the more I included each crewman in the planning and decisions I was making, then the more they did what I wanted them to do!

It also made all that practicing go much more smoothly. We practiced until we could rip through the procedures and still have enough of that "cognitive capacity" left to handle a few distractions (like a coupler with a death wish). I felt pretty lucky when it was over that night. Like the old aviator said, it seems the more I practice, the luckier I get.

Cdr. DuVal commands HC-2, based at NAS Norfolk, Va. This episode occurred off Singapore in 1977, when he was assigned to HC-1, Det 2, CVW-5 aboard USS *Midway* (CV-41), resulting in an Air Medal for Cdr. DuVal and Navy Commendation Medals for the copilot and crewmen.

Experience is a hard teacher because she gives the test first, the lesson afterwards.

Vernon Sanders Law
American baseball player

High-Pressure Hydraulics. After installing a stab hydraulic swivel assembly, the F-14 mechs prepared to make a pressure check. When they got 3,000 psi, the plane captain (in the pilot's seat) was told to move the control stick slowly forward and aft, while the collateral duty inspector (CDI) checked the expansion swivel to see if it was operating or if there was any hydraulic leakage. He then told the plane captain to increase stick movement, and as the plane captain complied, the CDI noticed the seal pop out of the swivel head; almost simultaneously, he was struck by a stream of hydraulic fluid shooting at 3,000 psi. The high-pressure stream hit the CDI in the face, knocking his safety goggles off. He was taken below for medical treatment. The examination concluded there would be no permanent eye damage.

The CO commented, "This CDI was the shop supervisor. He required that cranial helmets and eye protection be worn for all pressure checks. This requirement paid off in this case. The loss of this outstanding supervisor would have had a significant impact on the operational capabilities of this squadron. . ."

Nest in the Intakes. During several different periodic inspections, a squadron's P-3s were found to be homes for a number of birds. A 28-day inspection turned up small amounts of straw, paper and safety wire in one of the planes' prop spinner ram air inlets. A further check revealed that the three remaining spinners also housed bird nests.

A few days later, another P-3's rudder was inspected, and another nest and its dead occupant were discovered.

If a plane does not fly — for major maintenance or other problems that relegate it to a hard-down status — it quickly becomes an inviting home for birds. The smaller the space, the more inviting it appears to be. The effect of this type of FOD on the operating qualities of engines and control surfaces can be deadly. Birds around airfields can cause problems not only during flight, but also when aircraft are seemingly safe on the ground. — Ed.

Uncommanded Tomcat Wingsweep. After the mission brief, the F-14 crew made their preflight walkaround. The mission was the crew's first of the day. They were well rested

AIR BREAKS

and ready for the mission as the alert fighter. During preflight, the pilot noted his aircraft's wings were in oversweep. He and his RIO finished the preflight and climbed in.

During prestart checks, the pilot saw that the emergency wing sweep handle was stowed in the oversweep position. As was his habit, the pilot raised the wing sweep guard and extended the handle to the 1-inch locked position. The circuit breakers for the wing sweep drive (LE1 and LE2) and the CADC data computer circuit breakers (LA2, LB3, LC2 and LH2) were confirmed as pulled.

Power was applied and the engines started. The pilot engaged the pitch and roll SAS switches, then checked disengagement with the emergency paddle switch. He reengaged the SAS switches, then deselected the emergency generator and moved the rotary switch to the OBC position.

The plane captain signalled the pilot to select air source off so the ground crew could release the huffer hose. The pilot saw the air source was already off and he signalled this fact to the plane captain. The pilot then reached down and pushed in the four CADC data computer circuit breakers.

There was a thump and the Tomcat shook. The pilot looked over his shoulder and put his hand on the emergency wing sweep handle, feeling it move forward. He quickly extended the wing sweep handle, pulled it back, then stowed it in the oversweep position. If he had left it stowed there to begin with, the mishap would not have occurred.

As it was, the F-14's left wing tip had struck another Tomcat. After checking that the wing sweep circuit breakers were pulled, the pilot shut down, and he and his RIO exited their aircraft. Both fighters sustained damage, and one of the first F-14's Sidewinders was so badly damaged it was jettisoned overboard.

Inspection showed no electrical malfunction of either wing sweep circuit breaker although the lever locking panel mechanism had failed, which allowed the wings to move. The wingsweep system is intricate. Follow NATOPS.

"I Had Other Jobs That Had To Be Done." It was a scheduled "no fly" day to allow squadrons to conduct routine maintenance on air wing aircraft. The only traffic would be a C-2 at noontime. At mid-morning, an S-3 was respotted to elevator 2 for an engine wash and rudder servo maintenance. The aircraft handling officer told the S-3 aircraft director to be sure not to foul the elevator since there would be activity on the flight deck before noon.

The director moved the Viking onto the elevator, but allowed the aircraft's right wing butt to extend over the edge by approximately 6 inches. "I had other jobs that had to be done," he said afterward.

An hour later, an unqualified safety observer and the elevator operator prepared to move the elevator to the hangar deck to load mail and cargo for the incoming C-2. The aircraft handling officer had been called away. The elevator operator began to move the elevator after a go-ahead from the safety observer. However, no visual inspection had been made to ensure aircraft clearance of the flight deck. Thus, although a flight deck chief saw the impending crunch and tried to warn the elevator operator, the S-3 impacted the deck edge, whereupon the operator halted the elevator 8 feet below the flight deck.

Shut the Door! After an exterior inspection, the C-9B's forward cargo door was opened in anticipation of three scheduled lifts. However, the lifts were cancelled or did not show. After fueling, and a final check around the Skytrain's nose, the flight crew started engines for taxi. The crew chief assumed that a complete walk-around had been done and did not complete his own final inspection.

Indications in the cockpit were normal, but following takeoff, the crew heard a loud noise and felt a vibration on the right side of the aircraft. The tower called that a panel was apparently missing from the starboard side of the transport, whereupon the aircraft commander requested an immediate downwind and made an uneventful landing.

Although the cockpit indicator light for the forward cargo door was inoperative, a thorough preflight would have revealed the open door.

And for you helo folks — The station SAR helo responded to the alarm and scrambled. In his haste to answer the call, the HAC forgot the aircraft integrity checklist, which would have included a response from the crew chief on the position of the cargo door.

The copilot, however, picked it up as he arrived and strapped in. He went through the checklists, getting an answer from the crew chief that the doors were "aft and pinned." In fact, the two large doors were open, with only the left side pinned.

The Huey took off, intercepted the aircraft in distress and recovered at its home field 20 minutes after launch. A postflight revealed that the starboard cargo door was *missing*. The crew had never noticed its departure. No other damage was found on the aircraft. ◄

Go Around Is Not An Option

By LCdr. R.M. Clemens

Question: What do you do if you've gone through every corrective procedure in NATOPS that covers your emergency and you're still going down at over 1,000 fpm?
Answer: Land! The real question is, Where and how hard?

COMING up on the end of our third successive 11-hour mission, "it" happened. This particular mission had been normal in all respects: preflight at 1130 local, takeoff at 1409, then drone along at max endurance for an extended period, with a 2½-hour out and orbit in the middle. If you've ever flown in a Herk you know that rest is nearly impossible. My crew and I were beat from the previous flights and extra maintenance (60/90 generator change, ATM generator change and loss of four of the eight fuel gauges).

We were at FL 270, approximately 10 nm southeast of the Palmdale Vortac, at 0030 local, when our relief called airborne en route to relieve us.

I called Los Angeles Center and requested a slow descent to FL 200 in anticipation of being relieved. Center cleared us to 210, and the third pilot (3P) in the left seat kicked off the autopilot and started a gradual descent. He briefed the approach in detail, since this was only his second deployment. I tried to show interest, but at that hour, it was tough. I did note one thing, however: the mountain range north and east of the field still went up to 8,000 feet, and 3,200 feet to the south, just like it did on my previous tour four years ago. Little did I realize how important that would become.

As we approached FL 240, the relief aircraft took over and we headed home. I told the 3P to expedite descent and called center. I was talking with center and watching the artificial horizon as it went through 5, 10, 15, 20, 25 degrees nose down, with no reduction in power! As we rapidly approached 230 KIAS, I grabbed a handful of throttles and keyed the ICS to ask the 3P what he was doing. He was fighting the controls, two arms worth, trying to pull the yoke back. He was 6 feet 4 inches tall, and weighed 215 pounds, so I immediately knew we were in big trouble. He responded with, "I can't get the nose up!" He had already executed emergency procedures for runaway elevator trim, to no avail.

I grabbed a handful of yoke and together we were able to slow the aircraft to 200 KIAS, with a 1,000 fpm rate of descent. I took control of the aircraft and repeated the emergency procedures, but the nose just wouldn't come up. I checked the trim tab indicator and found it lower than I had ever seen it in nearly 5,000 hours of C-130 time, close to 10 degrees nose down. Now it was time for the "expletive deleted" that I had been holding back. It didn't help one bit.

At this point, I called Center, declared an emergency, advised them of our situation, and asked for minimum vectors to a long straight-in final. After the usual pregnant pause, they came back and rogered my request with a block altitude all the way to the deck. We continued our uncommanded descent to 16,000 feet, at which point I felt confident the 3P could handle the aircraft while I did a seat swap, to get the 2P in the right seat while I took over the controls in the left.

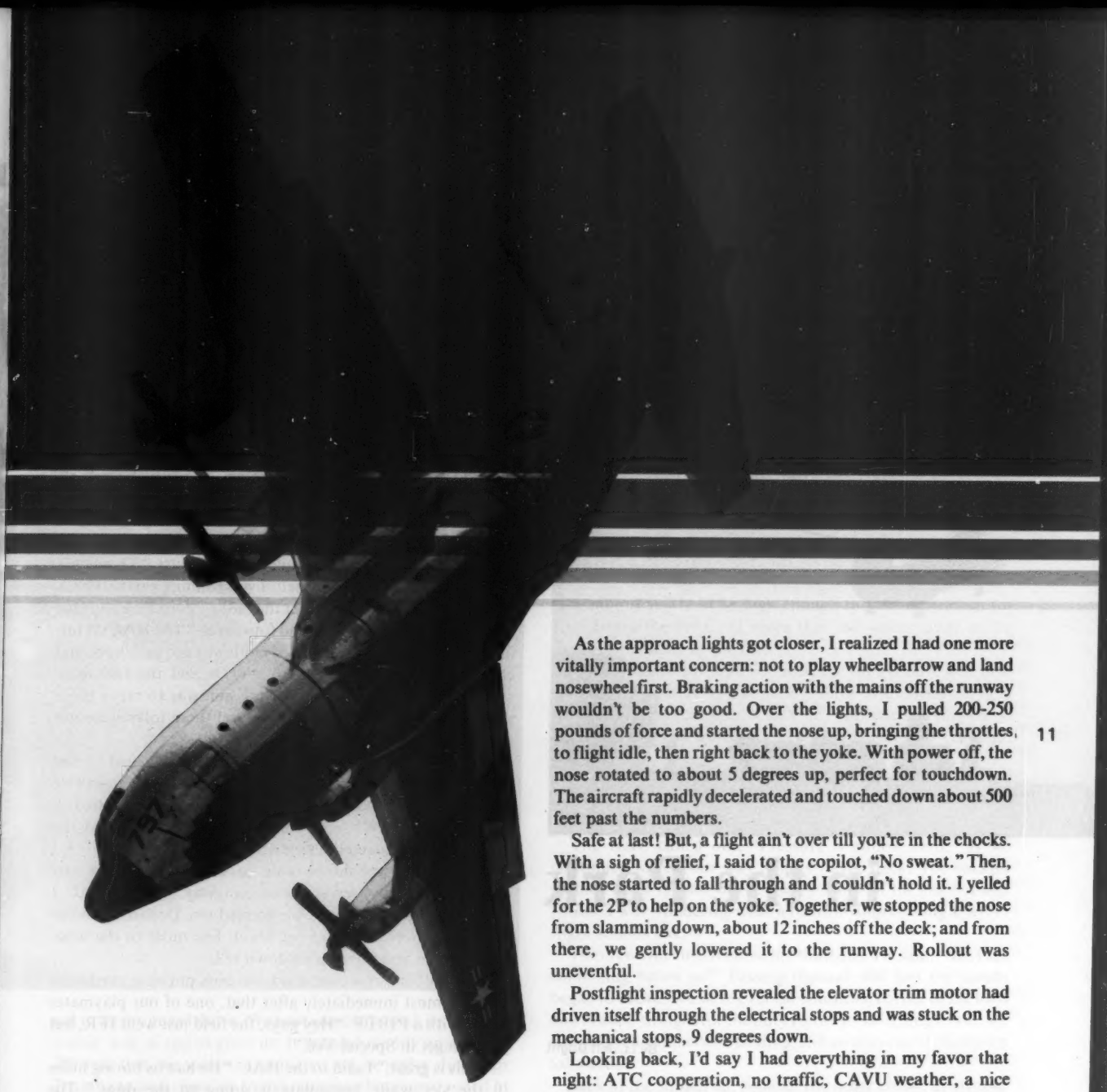
After settling into the left seat, my seat was full aft, rudder pedals, full aft, and my feet were braced against the bottom of the pedals. I was pulling like crazy to keep the rate of descent acceptable. Having my feet braced against the pedals made the rudder almost useless, but luckily, we would have to contend with only a slight crosswind on final. L.A. Center was absolutely beautiful with their vectors; a total of three, and I was on a 20-mile final with the ILS course intercepted, high, but on course.

Then came the next hurdle, getting the rollers down and locked. Gear speed in a Herk is 165 KIAS and we were still doing 200, descending. I had already briefed that it would be a no-flap approach and landing because the nose pitches over when flaps are selected, and I knew we couldn't recover from that.

I wondered how to get the gear down. KISS (keep it simple, stupid) was my thought. At 18 miles, I told the copilot to help haul back on the yoke while I pulled off all power. The airspeed started down and after an agonizing eternity, he hit the gear handle at 164 KIAS. With the gear down, airspeed was controllable down to 153 KIAS — recommended approach speed was 151 KIAS — but 150-200 pounds of back pressure was required to keep the descent rate at 800 fpm. "This is not a fun situation," I thought to myself.

At 15 miles, the glideslope started to come in and center asked if we had the field in sight. I heard the copilot's affirmative response and looked up at a sight to behold: 13 fire trucks and three ambulances with lights flashing had the field lit up like Christmas.

Center told us to contact the tower and wished us "Good luck." As the copilot switched frequencies, it finally dawned on me that a go-around was not an option. Even if I was able to level off, with both of us pulling on the yoke, any type of



climb was out of the question. The mountains off the departure end made level flight on a wave-off unacceptable, and my turning rate was restricted because I had to brace my feet against the pedals. I told the 2P to back me up throughout the approach as if his life depended on it (it did). I told the tower wave-off was not an option.

The ILS showed us high on the glideslope, but was coming down as I got closer. I hoped I had judged my rate of descent correctly so as to coincide with touchdown somewhere on the runway, and not in the approach lights, as my descent rate was steeper than the glideslope.

As the approach lights got closer, I realized I had one more vitally important concern: not to play wheelbarrow and land nosewheel first. Braking action with the mains off the runway wouldn't be too good. Over the lights, I pulled 200-250 pounds of force and started the nose up, bringing the throttles to flight idle, then right back to the yoke. With power off, the nose rotated to about 5 degrees up, perfect for touchdown. The aircraft rapidly decelerated and touched down about 500 feet past the numbers.

Safe at last! But, a flight ain't over till you're in the chocks. With a sigh of relief, I said to the copilot, "No sweat." Then, the nose started to fall through and I couldn't hold it. I yelled for the 2P to help on the yoke. Together, we stopped the nose from slamming down, about 12 inches off the deck; and from there, we gently lowered it to the runway. Rollout was uneventful.

Postflight inspection revealed the elevator trim motor had driven itself through the electrical stops and was stuck on the mechanical stops, 9 degrees down.

Looking back, I'd say I had everything in my favor that night: ATC cooperation, no traffic, CAVU weather, a nice long Air Force runway and an outstanding crew for backup. I followed every NATOPS procedure and came out a winner, saving not only a $85 million asset, but the lives of my crew. If I had it do it all over again, I wouldn't change one action. My training since day 1 as an ensign No-P (not qualified in model) had always stressed expect the unexpected. When it happens, follow NATOPS to the letter. That, combined with common sense, gut instinct and a little skill, will get you home safely.

LCdr. Clemens is an EC/KC-130 aircraft/mission commander with VQ-3 on his third TACAMO squadron tour. He has over 8,000 hours total time in various Navy and civilian aircraft, with 5,000 hours in the Hercules.

Just Another Walk

in the Park

By Lt. Jeff Bright

HAVE you ever approached a routine flight with this attitude? If your answer is yes, then I am sure that you are part of the majority of naval aviators. These "strolls," though simple in scope, can end up as challenging as any mission we perform. I fell into this trap during a carrier off-load mission.

It was still dark outside at NAS East Coast as we walked out to the flight line to preflight. The sky seemed crystal clear, and the air was cool and crisp. No problem waking up now, even though I had nodded off during our zero dark thirty brief. The crew gathered after completing the preflight to discuss any final preps before launch.

"This is going to be a breeze," I thought to myself, "two HACs, an experienced crew, good weather; what a way to make a living!"

The sun eased over the horizon as the five Sea Knights swirled the morning mist into motion. The launch went off without a hitch. I was flying as copilot, and the squadron safety officer was the HAC. We took up a loose trail position on the lead aircraft. After a short flight, the TACAN locked onto the bird farm, just 30 miles off the coast. "Things are going well." I thought to myself. I was running a panel check when the air boss boomed over the radio, "Zero Five and One One are charlie, spots three and four, over." The HAC set our bird down, and the deck jumped to life around us. Chock and chain men, cargo handlers, the ATOs and the fuel team swarmed over the aircraft. The mission was to move more than 200 hundred pallets of gear, and these folks were not wasting any time.

After a very short time on deck, the crew chief called, "Load secure sir, we're all set to go." The HAC called the boss and we were on our way. Nearing the coast line, the blue skies had all but disappeared. While we combat off-loaded the cargo, the HAC and I discussed the weather situation.

"I think we should be able to continue without any problems, but let's keep an eye on it anyway," said the HAC. I nodded in agreement and we pressed on. Departing to the north, I noticed a wall of fog about five miles to the west. Things were beginning to go down hill.

Arriving for our second load, the boss put us in starboard delta. Almost immediately after that, one of our playmates called with a PIREP. "Hey guys, the field just went IFR, but you can get in Special Vee."

"This is great," I said to the HAC. "He had us boring holes in the sky while homeplate is going to the dogs." The evolution was beginning to look familiar.

Thirty minutes later we were fueled, loaded and ready to continue. The HAC checked out with the boss as we cleared his area. I switched up tactical just in time to hear, "Hey guys, this fog is getting bad. I had to go down to 400 feet to get in under it." I exchanged a look with the HAC, and we nodded our heads in silent agreement. We would try to get this load in and wait out the weather.

I started to feel a sense of uneasiness as we approached the coast. That tingling on the back of my neck was warning me

not to let my guard down. We continued inbound, only to find a solid wall of fog to greet us. It became readily apparent at 200 feet that we were not going to get in under this soup. Turning to stay clear, we found ourselves low, surrounded by clouds, and somewhat disoriented. I instinctively reached for the automatic flight control switch as the HAC started a slow climb.

"I've got a small case of vertigo," the HAC called over the intercom.

"Okay, I'm backing you up on the gauges," I responded. "Let me know if you get any worse, and I'll call approach and get us a squawk." The situation began to settle down. Radar picked us up almost immediately. They assigned us a squawk and gave us vectors for a PAR into homeplate. I began to breathe a little easier. The controller's voice was reassuring.

"Just a simple PAR and we can look back on this one at the club," I joked. The HAC looked at me and cracked a tiny smile. It disappeared as fast as it came. The oil pressure in the aft transmission began to drop.

The HAC and I discussed our options. The PAR would take at least 10 minutes to complete. The pressure was dropping very slowly but steadily. As we were about to agree on a course of action, the chip light flickered on and then off.

"I think we should get down now!" I exclaimed.

The HAC responded by lowering the collective and making a radio call. "Approach, Hotel Whiskey One One, declaring an emergency, request immediate descent over."

After we explained the nature of our problem, approach called back, "One One, Approach, we will provide traffic clearance, descend at your discretion, unable to provide obstacle clearance, over."

I continued to monitor the gauges as the HAC gently maneuvered the aircraft. Using the TACAN to establish our position, I frantically searched my memory, trying to recall anything about the area we were flying over. "I can't think of anything that would be high enough to pose a problem for us," I told the HAC, "Except that tall water tower in the southwest corner of the field."

As we passed through 800 feet, the oil pressure was now down to minimum. We were only three miles from the field and hoping to break out. "One One, Approach, homeplate is reporting 500 feet overcast and three-quarter mile visibility, over."

"One One, roger," The HAC replied. Surrounded by the stark whiteness of the clouds, the chip light cast a sick orange glow across the cockpit as it flickered back to life.

The HAC called out, "Pressure is almost zero," as we continued to feel our way blindly to the deck. The cockpit seemed quiet in spite of the steady drone of the engines and rotors. I was wondering what a transmission coming apart in flight sounds like."

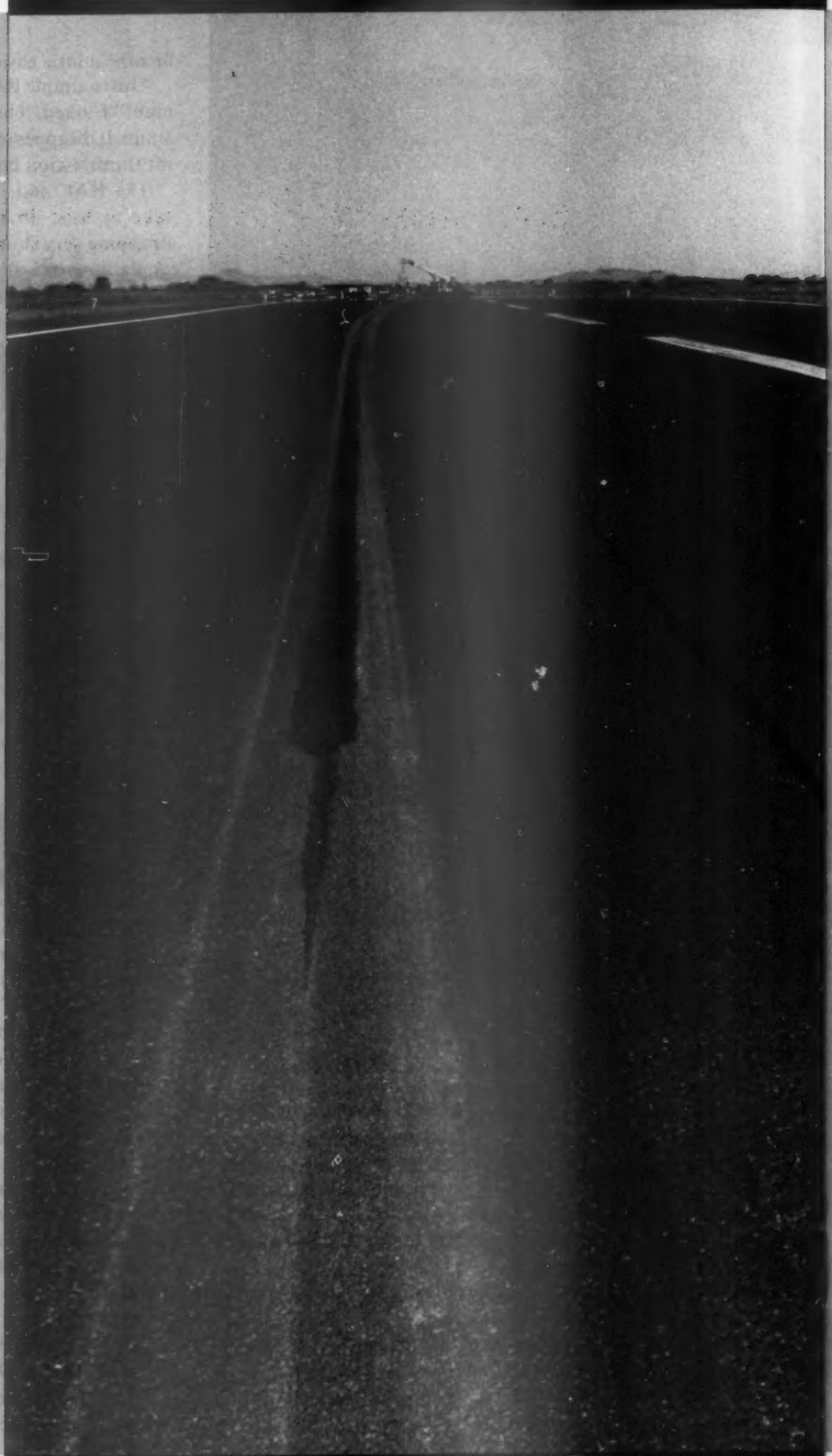
The crew chief interrupted my thoughts. He said, "Sir, I see something below us!" Passing through 400 feet the clouds began to break. We were over the southeast corner of the field and headed straight for the duty runway. Switching tower, we cleared for an immediate landing, and an uneventful shutdown followed.

Back at the squadron, some of the other crews sat around playing "What if" with us until some of the adrenalin wore off. We looked at various aspects of the flight. How could the preparation have been better or more complete? Should we have briefed more scenarios? Did we cover inadvertent IFR thoroughly? Looking back at the flight, it does not appear that way on the surface. But if you consider other possibilities, they were right. What if it happened at 200 feet while we encountered inadvertent IFR? Or, how about halfway between the carrier and the shoreline? Not the easiest of situations to put yourself in. ◄

Lt. Bright is a pilot with HC-3.

The Back Home Syndrome

By Lt. Jim Wright



TRY to recall your sense of elation and relief when that seven-month Indian Ocean deployment ended. Felt pretty good, didn't ya. You bagged 90 traps, many at night, and dealt with situations that tested your airmanship and headwork. In short, all the nuggets matured.

Naturally after a post-deployment leave period, a few back-in-the-saddle flights in the local area will be a snap for such a group of polished professionals. The friendly confines of homeplate and our aviation experience instilled a warm sense of well-being that's never with us at the boat. Anyway, the hop would be a breeze.

Our two aircrewman planned a local fam hop to the over-water training area and a non-precision approach at NAS Island. All items were briefed with special emphasis on aircraft emergencies, lost communication and crew coordination. It was a thorough but relaxed brief. Flying off the beach is a lot different from the boat, isn't it?

The flight went exactly as planned. Then it was time to shoot our approach. We took a turn in holding. Weather at the field was 1,000 broken and two miles visibility with scud drifting in and out. Tower informed us that precision approach radar was monitoring us. (Nice of them to look out for us on a TACAN, wasn't it?) At five DME we were cleared for the option: a touch-and-go, depart the pattern and head for home.

Pilot and RIO worked on flying the numbers. At MDA and 1.5 DME, the pilot acquired the runway environment and proceeded in.

"Hey, why the full power? We were cleared for a touch and go, right?" the RIO asked.

The answer came in a chilling statement from the pilot: "There are barricades and people on the approach end!"

They both got a glimpse of several terrified people scattering in all directions as they waved off. To add to this fully opened can of worms, there was a truck positioned on the runway, too. They informed tower of the situation on the climb-out.

The RTB was uneventful. Our Ops officer received a debrief, and we called the outlying field. The offgoing supervisor had forgotten to tell his relief about the presence of workers and equipment. The field wasn't closed either. They were open for traffic, supposedly monitoring the status of their runway!

Obviously some mistakes were made that day. Fortunately, nothing came of it except a number of scared people and several lessons learned.

First, your thinking at the boat and at home base shouldn't change. By that I mean aircrews need to constantly check and double-check themselves. The warm fuzzy feeling that can cloud your mind has no business at home base.

Second, don't count on anyone else to keep you safe. The aircrew is the ultimate judge of how and when to act based on the situation.

Finally, a significant percentage of mishaps occur very close to or at the field. Recall if you will the number of midairs in the pattern and ground collisions that were a result of tower personnel and aircrew error. We all know and respect the danger associated with carrier ops. At-sea flying requires constant vigilance and a game plan for dealing with the unexpected. Why should flying out of home base be any different? Don't let the "Back Home Syndrome" put you into a box.

We were lucky that day. Your approach toward every flight should carry the feeling that the unplanned and unforeseen *will happen at anytime.* A fully prepared mind is a key element in your game plan for flying it right, whether it's ashore or afloat.

Lt. Wright flies with VF-24.

B.I. Don't Leave Home Without It

By Cdr. Allen K. Mears, USN (Ret.)

WE were steaming into the Indian Ocean after our run through the Red Sea and the Gulf of Aden. At 0200 it was still hot, but nothing like the 95 degree Fahrenheit seawater and air temperatures we had endured during the day. Our ship, an LPH, was lead for our Marine Amphibious Readiness Group (MARG), which included two LSTs, one LPD and one LSD. The Soviets were shadowing us and the USNS ship that had joined us the day before. While most of us slept, the USNS ship broadcast a distress call for us to medevac an injured crewman.

As SAR copilot that night, I scrambled out of the rack to the blare of the IMC and my phone ringing. I met the pilot at the helicopter direction center (HDC), and we both put the brakes on and brought our own ship's doctor to HDC to question the corpsman aboard the USNS ship. The corpsman told us that a deckhand had been caught between two pallets of shifting cargo and suffered a crushed right leg. The victim was resting well, so the corpsman suggested we wait until first light to medevac the patient. The pilot and I liked that idea, since the nighttime haze and visibility was down to less than three-fourths of a mile.

Our skipper had a different plan and told us to man up right away and launch on the medevac. Our doc objected to the flight on medical grounds since the patient was OK. We, the flight crew, objected because it was 0230 and because the weather was marginal. The skipper brushed our concerns aside in the fever of the moment.

Our Huey was already on spot 4, just where we had left it after our duty SAR preflight six hours before. Brief, man-up and the checklist went like clockwork. We weren't taking any chances, and if there was a discrepancy on the aircraft, we'd have found it. We made sure we briefed for disorientation. We briefed it in HDC, we briefed it while doing the checklist, and we briefed it as the chains were coming off. The pilot was in the right seat, and we were both pumped up and ready to go.

"Power's good, gauges good."

"Rog, here we go."

"20 feet, 20 knots. We're clear of the deck."

"Rog"

"40 feet, 30 knots."

"Rog"

"80 feet, 30 knots."

"Rog"

"Watch your airspeed, put your nose over a little."

"No, not that much. Bring it back. What're you doing?"

"Something's wrong."

"Watch your airspeed, get your nose up! I've got it, I've got it!"

The sweat was pouring out of me, and I don't think I've ever had to concentrate on anything as much as I did then. The pilot was off the controls and confused. I had more adrenalin being pumped into me than I wanted. My good foundation in BI (basic instruments) was coming into play.

BI in the T-28. BI in the H-1. Instructing BI. It all came back and it worked. Attitude, wings level, VSI, altitude, attitude, power, heading, VSI, altitude, attitude, airspeed, altitude, airspeed, altitude, airspeed, breathe.

I got us to 500 feet and 90 knots, made sure the helo was all right, then turned it back over to the pilot. We just sat there for a while and let things calm down. It wasn't easy. There was no up and no down for the rest of the flight. When we could see a ship's lights, it was like they were hung in space. They were there, we were here, but I couldn't sense what either was doing.

I must have used everything I had to salvage that climbout because when it came time to start the approach for the medevac pickup, I wasn't up to it. The pilot had to make the cross-deck, cross-cockpit approach and landing to the forward helo pad on the USNS ship because my body was so confused, I was sitting twisted in my seat trying not to throw up.

The patient? He had a bruised right leg and some pretty good lacerations. He didn't have any broken bones, and he didn't even have a sprain. The whole episode made for a great sea story down in the wardroom, and the skipper bragged for weeks about how he rescued that guy.

The moral? Very few things can kill you as easily as a lousy instrument scan. Very few things can save you as well as a great one. ◄

There are few rotary wing drivers who cannot relate to this incident. Flying into the water on a night shipboard launch or recovery claims too many lives and airframes. Generally the mishap board response is to change NATOPS DLQ requirements or blame crew coordination deficiencies. Seldom is basic instrument proficiency addressed as a cause factor. Dark, no horizon, no s--- basic instrument proficiency is required by all aviators in the environment. Pinky night and peeky instrument time do little to build required proficiency and self confidence. Ask yourself, "who's cheating who, when you log your night and instrument time." Don't cheat yourself! — Cdr. William M. Feichtinger, Head Aircraft Operations Division, Naval Safety Center.

Cdr. Mears is a former editor-in-chief for the Naval Safety Center and is now with the Flight Safety Foundation, Arlington, Va.

. . . Things got tense as it took both of us pilots heaving our body weight down on the collective to stop our climb . . .

Crew Coordination Overkill

By Lt. M.K. Tribbie

I WAS the scheduled copilot on a night instrument hop in the SH-3G. Flying instruments in this helo was a challenge, considering my particular helicopter was the CH-53E. After the first TACAN approach, I quickly settled into a comfortable routine.

I was amazed at the "can do" spirit of our aircrewmen. No sooner had one of the pilots called for a frequency change when the crewman switched it right up. I didn't remember doing it that way before, but I figured these H-3 guys must really have their crew coordination wired.

Oh well, approach was calling, and I was off altitude by about 10 feet, so I concentrated on the gauges. After an hour shooting TACAN approaches, the HAC suggested he try a few.

"You've got it," I said, waving my hands as we began our missed approach.

Being an H-53 driver, I was accustomed to stiffness in the collective since we have an index-finger-trigger collective trim release. On the other hand, the H-3 guys like to fly with a loose collective. The HAC called to loosen the friction since I had adjusted it a few turns tighter for my portion of the flight. Lickety-split, the aircrewman's arm shot into the cockpit and performed an instantaneous adjustment for us. I looked up and estimated another couple of seconds before we went into the goo. About that time the HAC again called, "Loosen the [expletive deleted] collective!"

I quickly reached down and to my dismay discovered the collective friction would not budge. We were now in the clouds, climbing 1,000 fpm with approach inquiring why we busted our level-off. Things got tense as it took both of us pilots heaving our body weight down on the collective to stop the climb. We next requested immediate vectors to home plate via VMC. We bumped and jolted our way down.

We talked about what happened on the way down. The crewman said he was sure that he had made the correct adjustment. The one adjustment we made was to tighten our harnesses and prepare for a wild ride to the deck with an almost frozen collective. The HAC did a superb job getting us down without pushing the mainmounts through the sponsons or rolling the tires off their rims sideways.

Trouble-shooters were summoned, and it ultimately required a pair of channel-locks and PLS spray lube to loosen the friction ring. Imagine the possible consequences during single-engine flight or when at sea in heavy rolls to the small deck. The squadron pilots and aircrew were debriefed, and this type of crew coordination is now more thoroughly covered during preflight briefs.

One of the most favorable virtues of our highly trained naval aircrewman is a "can do" attitude. Just make sure that spirit is tempered with some ground rules regarding who does what. ◄

Lt. Tribbie is safety officer for HC-1 at NAS North Island, San Diego, Calif.

In this case, it appears that the overzealous crewman was just trying to be helpful. This "help" can be just as hazardous to the safe, coordinated operation of the aircraft as a lack of help from a nonparticipating crewman who idly sits back and watches the pilot fly the aircraft into the water, all the while assuming the pilot knows what he's doing. You cannot have too much coordination! The definition of the duties and responsibilities of each crew member, including discussion of specific cockpit procedures, is a portion of the overall crew coordination effort. It should be part of the brief, especially when one of the flight crew is not familiar with the aircraft. — LCdr. A.R. Miller, Jr., H-3 analyst, Aircraft Operations Division, Naval Safety Center.

In Cold Water

By Lt. K.L. Underwood

I AWOKE to the first Maine snowfall of the season. It was the last day of my squadron's Operational Readiness Examination given by the wing. My ordnance shop had been loading weapons on squadron aircraft for three days with very few breaks between uploads and downloads. As branch officer, I had been observing these loads at the hot spot all week.

Before leaving home, I brushed the snow off my car. No sense in rushing, I thought. The next upload wasn't scheduled for another hour. I would just take my time and let the car warm up.

As soon as I stepped on the accelerator, I got my first impression of the road conditions. The wheels momentarily spun in place.

"Wow, these roads are pretty slick," I thought. "I hope my wife drives to work carefully."

The road crews hadn't been out yet. The radio announcer warned of icy roads while I drive through the Christmas-like scenery. As I passed by the last hangar, the road disappeared completely under the snow. The hot spot, located in a remote part of the base hadn't seen any traffic. I proceeded cautiously down the winding golf course road. After another mile, my car began picking up speed as it descended from the top of a small hill. Just then, I felt the tail of the car slip a little to the left.

"No problem, I'll just make a little correction," I thought. The tail swerved through center over to the right at an even greater angle.

"Whoa! This is getting pretty bad." I continued to take corrective action, but all efforts to stop the fishtailing vehicle were useless. I was heading for the trees on the left side of the road with nothing to do but turn back to the right. I immediately realized I should have taken my chances with the trees. All I could see was the hazard for the number two hole, a pond that had my name on it! Only one thing left to do —stomp on the brakes and hope they grabbed on to something. They didn't. My car skated airborne off the road embankment, heading for the water below.

"I can't believe this," I thought, sailing through the air. "I better brace myself for . . . "Boom! The car landed in the water with a jolt. I immediately began rolling down my window, thinking that I would jump out and crawl on the roof. But before I get the window halfway down, water began filling the interior, like fire hoses being fired from every direction.

At that point, it crossed my mind that I might not make it out. It seemed like a stupid way to die. Almost instantly, the vehicle was turning over on its side, while water continued to rush in. At that moment I had a comforting feeling. "Wait a minute! I've done this before," I thought, remembering the helo dunker training I received in flight school.

"OK, let the water come in. Equalize the pressure. When it gets up to my neck, I'll take one last breath." It began to get dark, and the windshield was covered with water and bubbles. I swallowed a little water with my last breath. The car continued to roll inverted and sank to the bottom.

After a couple of seconds, I began my egress procedures, floating upside down. I tried to roll the window down further, but it was stuck. I reached over and felt jagged glass and a large enough hole to slide through.

"Excellent!" I then reached over to unfasten my seat belt. I felt it release and tried to get out. Reaching outside the window, I tried to push myself away from the car with my left hand, but when I did, my arm sank up to my elbow in the mud and silt. I then put my right hand on the roof and tried to pull myself out. Although the lap belt had released, the shoulder harness was locked tight around my chest, and my tugging efforts were not helping. I instinctively began kicking and thrashing about like a fish out of water, but then realized that my air supply would be used up if I continued. Just when I decided that I was going to have to put my arms and head around the other side of the harness, I felt it give a little. I kicked, pulled and slipped my body through the opening, popping to the surface in only 5 feet of water.

After a few coughs and breaths of fresh air, I walked over to the snow-covered bank and crawled up onto the road. The car was completely submerged except for the back wheels and gas tank. With no other vehicles or help in sight, I decided to walk to the golf shack, about a half mile away. Before leaving, I wrote "I AM OK" in the snow just in case someone drove by, saw the tires and decided to be a hero. Later I discovered that it had prevented the base XO from doing exactly that.

I noticed blood dripping onto the snow, so I began checking myself for cuts. My uniform seemed to be intact except for the mud and water. I then headed for the golf shack; a brisk walk turned into a fast jog as I began to feel cold for the first time. I received help from two of the employees, and before long, I was on my way to the first aid station. Treated primarily for hypothermia, my only other injuries were mild bruises and an ear laceration.

In retrospect, what could have been a fatal accident was nothing more than a minor scrape. Ever since joining the Navy, we've all been overwhelmed with information concerning the importance of seat belts. Fortunately, this reinforced my habit of wearing them. Had I not been wearing a seat belt that morning, my head would have hit the windshield upon water impact, perhaps knocking me unconscious. It's immaterial that the harness later caused me some difficulty. The helo dunker instructor who taught me in Pensacola and Jacksonville may have also given me the edge I needed to survive the ordeal. As a P-3 pilot, I thought I would never use this training. Although this type of accident is uncommon, it shows that we never know when or where survival training may save our lives.

Lt. Underwood is the ASO for VP-10. He is a designated PPC and mission commander.

LCdr. Tommy Mariner
VA-94

Operating from USS *Enterprise* (CVN-65) in the North Arabian Sea, LCdr. Mariner advanced the throttle of his A-7E Corsair to military, and to his surprise, obtained only 87 percent RPM. Inlet Guide Vane (IGV) override was off, and small throttle movements, followed by reslams to military, only reduced RPM further. By selecting manual fuel control, he was able to increase RPM to 89 percent.

Holding at 9,000 feet overhead the ship, LCdr. Mariner examined his options. A normal arrestment was out of the question. He could take the barricade, attempt a 100-mile divert to a foreign field or eject.

After a discussion with squadron and air wing representatives, and in accordance with NATOPS, he tried APC throttle control. It didn't work. LCdr. Mariner slowed to 18.5 units angle of attack, selected normal fuel control, then engaged APC in order to force automatic power addition. Although the throttle remained at the military power position, the APC reduced RPM even further. He immediately deselected APC. Now the Corsair was developing only 85 percent RPM with a fuel flow of 2,400 pounds per hour in manual fuel control.

Trading altitude for airspeed, LCdr. Mariner descended to 4,000 feet. At this reduced power setting, a barricade arrestment was ruled out, and he decided to divert to the emergency field now 93 miles away. During the first 31 miles, the A-7 lost 1,000 feet. Sixty miles from the field, LCdr. Mariner lowered his flaps 15 degrees to maximize lift. With the flaps lowered, the Corsair decelerated to 160 KIAS and fuel flow dropped to 2,100 pounds per hour.

The higher lift configuration allowed the aircraft to climb 500 feet, but as the aircraft decelerated, thrust reduction and a 20-knot head wind further degraded its range. Concerned with this power reduction, LCdr. Mariner raised the flaps and accelerated back up to 220 KIAS. At this point, the A-7 had descended to 2,200 feet, 45 miles from the field.

The airfield was located on the A-7 inertial system and radar, giving exact range to go. LCdr. Mariner cycled the flaps to 15 degrees down to gain altitude twice more during the remaining 40 miles.

At four miles, he was down to 800 feet AGL. He extended his flaps to 25 degrees and slowed to 180 KIAS, then lowered the landing gear at 450 feet and two miles. At one mile, and 155 KIAS, LCdr. Mariner lowered full flaps and reduced the throttle to idle. The engine decelerated normally, and the Corsair touched down at 140 KIAS, rolling to an uneventful stop. After clearing the runway, the aircraft could attain only 82 percent RPM at military. Subsequent investigation found a broken throttle controlex cable.

BRAVO ZULU

Left to right:
AW3 Bryce Merrill,
AD1 Jeffrey Murray
Ltjg. Tom Lindsey
LCdr. William Anderson
LCdr. Tom Reilly

LCdr. William Anderson
LCdr. Tom Reilly
Ltjg. Tom Lindsey
AD1 Jeffrey Murray
AW3 Bryce Merrill
VP-49

The P-3 was making touch-and-go's during a pilot proficiency flight at MCAS Beaufort. While resetting flaps and trim during the short landing rollout, in preparation for the next takeoff, the flight station crewmembers spotted a vehicle on the runway. After a double-take, the crew recognized the vehicle as a *toy car* driven by a *child.* The car was 1,000 feet ahead and left of centerline, moving left to right.

LCdr. Anderson (IP) immediately took control, aborted the takeoff and smoothly steered to the right to avoid the child. The left wing tip missed him by an estimated 50 feet. Subsequent investigation revealed that the boy had wandered away from his mother while she was walking along an airfield perimeter road.

In his endorsement to this Bravo Zulu, Capt. J.S. Coleman, Commander, Patrol Wing 11, noted, "MCAS Beaufort is not a high density traffic area. Aircrews can experience a false sense of security. The runway is 12,000 feet . . . that the child was noticed at all on such a long, up-and-down sloped surface is a credit to the flight station crew. "The plane commander did not rely on his relatively senior and very talented PIC to take evasive action. LCdr. Anderson took control and swerved to avoid the child, displaying exceptional situational awareness . . ."

...The pilot tried to jump, but slipped and fell 20 feet to the elevator. The tractor separated from the plane and landed only a few inches from the injured pilot...

A Pitching Deck Primer

By LCdr. C.S. "Skip" Sayers

IT was another warm summer day on Gonzo Station in the Indian Ocean. With the ship heading into the wind, the deck pitched gently but substantially with the monsoon swell that is characteristic of summertime in this part of the world. Although the cruise had just started, the first few weeks had been exciting.

Twice, aircraft had gotten away from flight deck personnel while being moved from one spot to another on the pitching deck. Fortunately, aside from providing the brake riders a thrill, no significant damage or injuries occurred. Each incident was followed by lengthy ready-room brainstorming sessions aimed at coping with the problem and improving the conditions for all hands. Our flight deck had been the Battle "E" winner for two consecutive years, so we in the air wing felt confident this problem could soon be solved.

As we manned up for the second event, the flight deck was a hive of activity with tractors and jet-starting units moving around preparing for the start. While I preflighted, I overheard a yellow shirt tell the pilot of the aircraft next to me they intended to move his aircraft to the catapult from elevator No. 3, where it had been spotted the previous night. I continued my preflight and did not give it another thought.

It was common practice for pilots in our squadron to ride the brakes if the situation dictated. Since it was close to launch time, the pilot said he would assist the yellow shirt. Squadron SOP stated that the RIO would not sit in the back seat unless the engines were turning or the seat was armed. Lucky for him, he had read that section of the SOP.

The yellow shirt, a familiar face and known as a sharp director, had two blue shirts connect the tow bar to the aircraft's nosewheel. As the pilot climbed up the ladder, he noted the tractor being backed toward his aircraft and the blue shirts breaking down the nose chains. In accordance with the air wing SOP, this was routine. So the pilot began to preflight his seat in preparation to move the aircraft, realizing he would be given the appropriate signals from the yellow shirt before the plane was broken down.

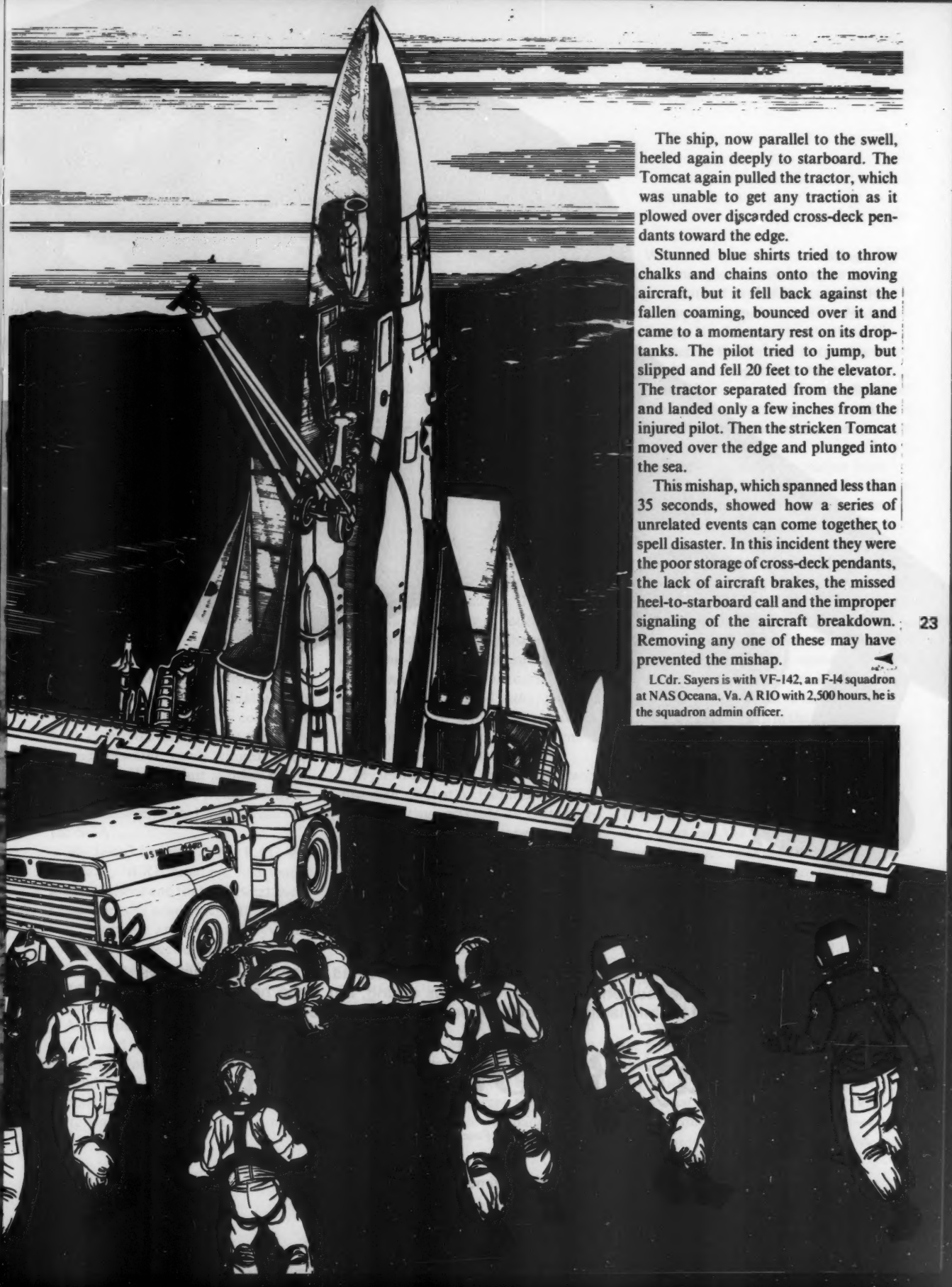
Today this wasn't going to happen since the yellow shirt had taken a short-cut to give a buddy the opportunity to get some chow while he alone moved the aircraft to spot. Unfortunately, the yellow shirt who remained on the roof had been at chow and missed their boss' call for a heel to starboard 20 minutes earlier. The turn into the wind, which had been delayed to recover a helicopter, resumed as the aircraft was being broken down.

Sitting on the tractor, the yellow shirt gave the "hold brake" signal to the pilot while signaling the blue shirts to break down the mainmount chains and pull the chocks. Unfortunately, the pilot could not see the tractor, much less a person sitting on the tractor when it is connected to the aircraft.

An F-14A pilot needs approximately four minutes of steady pumping on the auxiliary brake handle to pressurize a "red" brake accumulator. Then he must cycle the brake handle to port fluid to the wheel cylinder for brakes. Since he had been in the cockpit only about a minute and did not anticipate the aircraft would be moved for several minutes, there essentially were no brakes on the aircraft.

To complete the scene, the location of the aircraft on elevator No. 3 should be noted. The material condition of elevators is often taken for granted by air wing personnel, which was true in this instance. The coaming (or deck-edge scupper) on elevator No. 3, providing about 8 inches of barrier, was secured with only one of eight pins required to keep it in the proper position. Normally this is no problem; however, when 64,000 pounds of Tomcat bump against it, a problem is soon created. To make matters worse, the elevator was used as a storage place for discarded cross-deck pendants. The excess grease and cables made it even more of a challenge to move aircraft, even in calm seas.

As the ship continued its turn into the wind across the swells, I saw the F-14 roll backward into the coaming with its surprised pilot. I could hardly believe my eyes. The Tomcat was dragging the tow tractor, its wheels spinning, into the coaming as the ship headed to starboard. For a moment the ship headed back to port, and the tractor pulled the doomed aircraft off the coaming. The coaming then fell forward after the weight of the aircraft had sheared the only pin holding it in place. The coaming now provided only 4 inches of barrier.

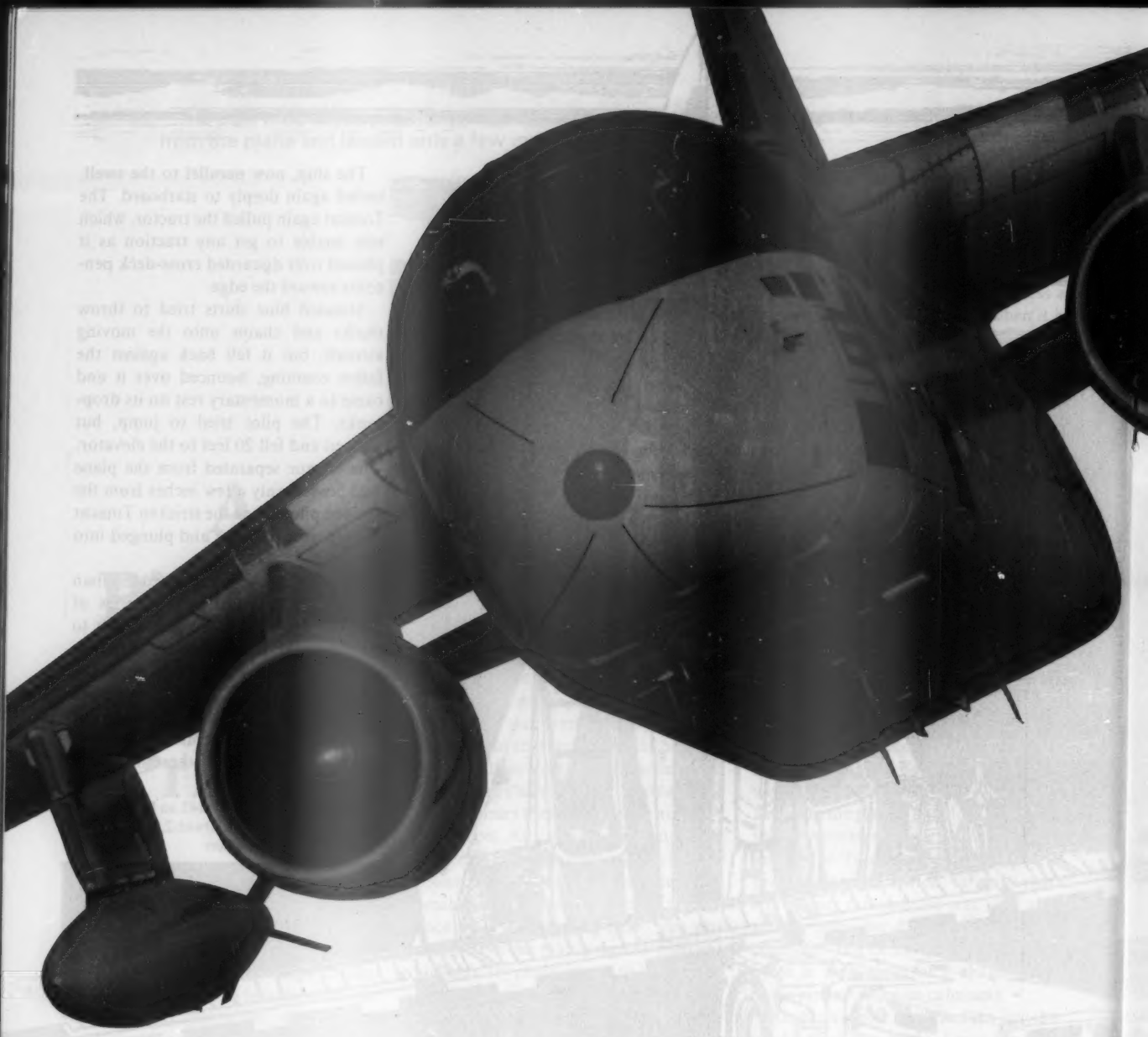


The ship, now parallel to the swell, heeled again deeply to starboard. The Tomcat again pulled the tractor, which was unable to get any traction as it plowed over discarded cross-deck pendants toward the edge.

Stunned blue shirts tried to throw chalks and chains onto the moving aircraft, but it fell back against the fallen coaming, bounced over it and came to a momentary rest on its drop-tanks. The pilot tried to jump, but slipped and fell 20 feet to the elevator. The tractor separated from the plane and landed only a few inches from the injured pilot. Then the stricken Tomcat moved over the edge and plunged into the sea.

This mishap, which spanned less than 35 seconds, showed how a series of unrelated events can come together to spell disaster. In this incident they were the poor storage of cross-deck pendants, the lack of aircraft brakes, the missed heel-to-starboard call and the improper signaling of the aircraft breakdown. Removing any one of these may have prevented the mishap.

LCdr. Sayers is with VF-142, an F-14 squadron at NAS Oceana, Va. A RIO with 2,500 hours, he is the squadron admin officer.



. . .My instructor pilot calmly and clearly informed me that we had lost the No. 2 engine. My instincts told me that something he had said was wrong, but since he was a senior instructor, I ranked his infallability somewhere between CNO and God. . .

I May Be Dumb, But...

By Lt. Joe Fletcher

THE transition from student at the Naval Air Training Command to the RAG is comparable to graduating from high school and entering college. In both cases you tumble from the top of the heap (senior, newly winged) to the bottom (freshman, just another FNG). Still, I was glad that I would finally be flying in an operational tailhook aircraft, the S-3A.

My initial training in the RAG was standard; SERE training, instrument ground school and flight physical. Next came weeks of academic instruction in fuel, hydraulic and electrical systems, emergency procedures and weapon system operation. At last the time had come to move on to the flight side of the curriculum.

As I prepared for my first flight, I was excited and apprehensive. Excited because after 18 months of difficult training, I would finally be flying an operational aircraft. Apprehensive because everything was so new I didn't have much self-confidence. Would I be a help or hindrance if anything went wrong? I was relieved when I looked at the flight schedule and saw that my instructor was one of the most experienced pilots in the command. He would be tough, but I knew that if anything went wrong with the aircraft, he would take care of me.

The big day came. The first phase of the FAM-1 consisted of a flight characteristics demo and aerobatics. I handled them with no problems. The second phase was a number of touch-and-gos to demonstrate handling characteristics in various landing configurations.

Immediately after our fourth touch-and-go I heard a loud bang, and the master caution panel lit up like a Christmas tree. My first airborne emergency: engine explosion in flight.

My instructor pilot calmly and clearly informed me that we had lost the No. 2 engine. My instincts told me that something he had said was wrong, but since he was a senior instructor, I ranked his infallability somewhere between CNO and God. The memory items for an engine explosion were: throttle (affected engine) — off, fire pull handle (affected engine) — pull; and ignition (affected engine) — off. I reached up and placed my hand on the No. 2 fire pull handle, which would have shut off fuel and hydraulics to the No. 2 engine. Why did I think this was wrong? Was I reading the instruments correctly? I hesitated with my hand on the No. 2 handle long enough for my instructor to reach up and pull the No. 1 fire pull handle.

What the heck was he doing? It turned out that it had been the No. 1 engine that had exploded, not No. 2. He had simply misspoken earlier. Had I pulled the No. 2 fire pull handle, I would have shut off the fuel and hydraulics to our only operating engine. All this took less than five seconds. We completed the remainder of the emergency checklist and made a single-engine arrested landing.

I learned two valuable lessons from that flight. The first was to trust my instincts. I had thought something was wrong, but I hadn't said anything. The second was to speak up if I felt the statements or actions of fellow aviators were incorrect, no matter how senior they were.

The importance of these lessons was reinforced by a recent hazard report from a West Coast S-3 squadron. A Viking was conducting touch-and-gos when a ground observer (a nugget NFO with less than a month in the command) noticed that the port mainmount looked smaller than normal. An airborne visual inspection confirmed a deflated port mainmount tire. The aircraft returned to homeplate for an arrested landing. In his comments the CO noted that the nugget's "minimal experience was compensated for by an experienced visual awareness and sense of 'right' and 'not so right' . . . If it doesn't look right, it probably isn't. Better to speak up than to wonder after the fact, 'Could I have made the difference?"

During my first flight debrief, my instructor gave me an above average in emergency procedures for "guarding the good fire pull handle." Since I had already learned my lesson, I didn't think anything would be gained by letting him know what I had almost done. After all, I may be dumb, but I'm not stupid. ◄

Lt. Fletcher is training officer for VS-28, NAS Cecil Field, Fla.

The Rescue of the *Bonefish*

ON April 24, 1988, USS *Bonefish* (SS-582) experienced a serious fire that began in high-voltage DC cable in a midship compartment. The fire rapidly spread upward, producing fumes and dense smoke. Many of the 92 crewmen aboard were affected and barely managed to escape to the stricken sub's deck and sail to await rescue by nearby ships and helicopters.

Three men died, but 89 survived, rescued by the combined efforts of helos and whaleboats. Five SH-3Hs from USS *John F. Kennedy* (CV-67) and one SH-60 Lamps MK III Seahawk from USS *Carr* (FFG-52) rescued 62 crewmen, shuttling them to the *Carr*. Some seriously injured crewmen were subsequently flown to *Kennedy*. Here are two accounts of the airborne portion of the rescue. The first is from the pilot in command of the first helicopter on the scene, and the second story is by one of his aircrewmen.

An Easy Day

By Cdr. J.J. Waickwicz

"I need help! Get as many squadron aircraft out here ASAP! We've got a big problem!"

It was a warm sunny day off the coast of southern Florida. We were having a great Advanced Phase prior to an upcoming fall cruise and were only three days from a port visit to Ft. Lauderdale. My tour was coming to an end and so would my ulcers as the maintenance officer. I was scheduled to fly a leisurely afternoon PG/ASW mission with the prospective NATOPS officer. Today, I would sit back in the left seat, enjoy the weather and watch the sea creatures splash around the CV. With the CO already working with the exercise sub, I didn't think he'd ever come back in to allow us to go out for some sub time — an *easy* day.

As we droned around in Starboard D, we could hear the skipper talking to USS *Carr* (FFG-52) as they conducted coordinated attacks on USS *Bonefish* (SS-582). About an hour and one-half into the flight, we were salivating to get into the ASW picture, but, no way, the skipper was having too much fun.

At about the two-hour mark, the CO called to say he was inbound for a swap. He would take the PG so we could get some ASW time. With clearance from the tower, we proceeded outbound to exchange missions at the 15-mile point. Our gears immediately shifted as we started thinking about ASW tactics, and re-briefed our plan of action. As I checked the fuel gauges, I noticed we had two hours to splash. No problem. One hour of good ASW and back in plenty of time to make our recovery.

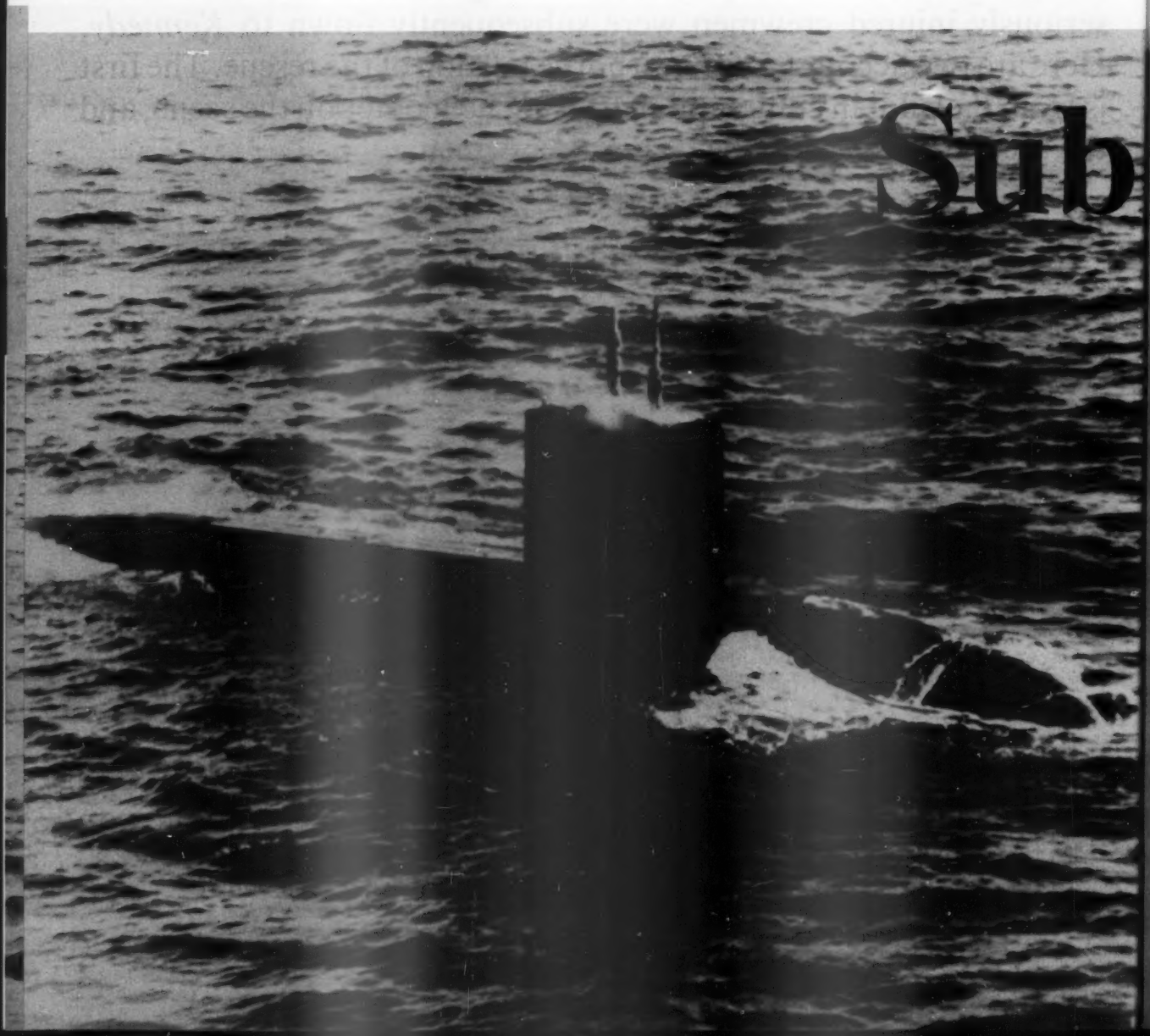
With the swap report complete, we were streaking out to datum — 42 miles from mother. Still a fairly *easy* day.

At datum we found the *Carr* trailing the *Bonefish*, which

was at periscope depth. Upon arrival, we checked out our equipment and established comms with all units. At COMMEX, the sub went sinker and the games began. We were 1v1 against the sub, and loving it. The crew was clicking and immediately gained attack criteria. After 30 minutes of great ASW, the *Carr* called that the sub was surfacing with a fire on board. Immediately, we retrieved the sonar dome and rigged for rescue. Maybe this wasn't going to be such an easy day.

Once on the surface, the sub's crew evacuated the hull bringing numerous injured personnel on deck. The *Carr* launched her LAMPS MK III helo, and we stood by while the situation was evaluated. The *Carr* called to begin hoisting the crew from the stricken sub. At first, the SH-60 was going to start the hoisting. I overrode the call since we could take more off. The MK III helo took station behind us as a backstop in case a crewman fell off the floundering sub. Hoisting began from the right seat as the sub's sail provided the only visual reference. After recovering eight personnel, we were waved over to a badly injured crewman on the diving plane. My copilot made a flawless, high, no-reference pick-up, guided calmly and expertly by the first crewman. With nine survivors aboard, we proceeded to the *Carr* while the SH-60 took our place over the sub. Our normal passenger load is three, but because we had a greatly reduced amount of fuel, and we were not going that far, and the circumstances required it, I decided to take the nine submariners aboard.

As we came around for our second session, we found the LAMPS helo had placed a crewman on board the sub to facilitate the crew getting into the horse collar. Again, we



hoisted nine people aboard and carried them to the *Carr*.

One of the sub's crewmen was in the water, untethered, and the SH-60 went into action. The MK III was immediately over him and quickly got him aboard. Eventually, we would find out that playing backstop had prevented anyone from being washed overboard and lost.

On our third hover over the sub, the wind had twisted the sub around, and the copilot could only see the stern, so I had to fly from the left seat to maintain a visual reference to the sail. By this time, the hoisting had become almost routine. Our crewmen were timing the hoists, which, from aircraft to deck, and back to the aircraft with a survivor, was 60 seconds. As we picked up the sixth crewman, the cavalry came flying over the horizon. Four of our squadronmates arrived on scene to provide us and the SH-60 some relief.

We had 15 minutes of fuel left, about 400 pounds, so we refueled on the frigate, as well as getting some liquid replenishment for ourselves — we were dehydrated. While we refueled, five medevacs were readied for us to carry back to mom. Once back aboard the CV, we were hot-seated, ending our "easy" flight.

As we sank into the ready room chairs, completely exhausted, we reflected on our day. Plane guard, ASW with numerous attacks, SAR with 24 rescues from a sub, medevac of five personnel, DLQ requal, and — for me as MO —having all six aircraft airborne.

The bottom line is that there is no *easy* day in naval aviation. The routine can turn into the most challenging and demanding flying in a heartbeat. Strong training and crew coordination allowed us to complete all the missions.

Cdr. Waickwicz was the maintenance officer for HS-7 at the time of this incident. He is currently the chief of staff for HSWING One, and P-XO of HS-15.

in Trouble!

By AW1 James E. Chapman

MY squadron is in the business of sinking submarines and saving lives. A flight crew will rarely find themselves performing both missions during one sortie. However, on April 24, 1988, the men of HS-7 and the crew of USS *Carr* (FFG-52) found themselves involved in both. We were working with the *Carr* on an ASW exercise. Our target was USS *Bonefish* (SS-582).

"Sonar contact bearing two five seven, range 920."

"Roger sonar, bearing clear, classify." My pilot and copilot kept our SH-3H in a perfect coupled hover while my second crewman and I tracked the *Bonefish* in preparation for a simulated MK 46 torpedo attack. We were in our element; it was ASW at its simulated best. But, suddenly, something went wrong.

The *Bonefish* keyed an emergency distress signal via its underwater communications net. As she surfaced, smoke billowed from her sail area. Two men, blackened by smoke, waved their arms vigorously in an emergency distress signal.

As the *Bonefish* lay dead in the water, her crew began to clamber haphazardly out of open hatches on the sail and after deck. Smoke poured from both hatches as if it were coming from an industrial smoke stack. Some men were visibly more affected by fumes than others. One man, overcome by fumes, fell from the conning tower onto the port diving planes, and lay there, unconscious, in a precarious condition.

Carr closed rapidly to assist, and we proceeded to a hover 50 yards astern of our troubled playmate. At this point, the weary submarine crew began jettisoning shoes and expended firefighting equipment in preparation to abandoning ship. Our ASW partner was fighting for her life.

We immediately took control of the situation and began rescue procedures. We moved in over the smoking submarine and hoisted eight dazed submariners off the after deck. Then, we maneuvered to the port diving plane to try to rescue the unconscious crewman. Holding high to avoid the periscope and antenna mast, my copilot hovered to allow the unconscious crewman's buddies to place him in the horse collar.

We then took the nine crewmen to the *Carr* for medical treatment. We quickly returned to rescue 15 more, in two trips.

By then, four more HS-7 helos from *Kennedy*, and an SH-60 from *Carr*, had arrived. As I watched, a skyful of helicopters plucked man after man from the water and sub with precise coordination. I realized this evolution was the culmination of years of preparation, training and, most of all, courage. Without the efforts of our aircrews and squadron personnel, more lives would have been lost.

AW1 Chapman is an ASW first crewman with HS-7.

Seeing the Forest Through the Fog

By Lt. James R. Doak

"WIRES! Wires! Wires!" The cry came over the UHF from the lead aircraft while we frantically scanned from side to side for wires directly ahead of us. I remembered telling the flight leader that we should have cancelled this hop because of the weather.

It began just like any other Friday night before a reserve drill weekend. The pilots and aircrews were gathered in the ready room, talking about what had happened to them in the past two weeks. Everyone took a seat when the flight leader for that night's flights walked into the room and began the brief.

It was all very cut and dried. There was to be a four-plane launch, divided into two sections of two HH-1Ks each.

We would operate at the OLF, performing night vision goggle (NVG) training involving touch-and-go's, and multi-ship landings. My section would be led by two NVG instructor pilots, and me, an NVG instructor, with an NVG Phase II high-time pilot. The flight leader began to go over the weather portion of the brief. The forecast called for deteriorating conditions during the latter portion of the hop. I mentioned to the flight leader that, according to SOP, we should cancel. He noted my concern and told the other crews to keep a lookout for weather. If it started to look bad, we could call it a night and come home. I dismissed my concern as being the junior officer in the squadron and considered the decision part of the "can-do" atmosphere that prevailed in the squadron.

Everything was going as briefed, and it seemed we were going to beat the weather. My section had completed our required syllabus items and was taking a short breather on deck. As I stared out from under my NVGs into the thickening fog around me, I thought back to my NVG training. I was warned of the NVG's capability to fool you into thinking you are not in fog or precipitation when you could be right in the middle of it due to the equipment's ability to see in a low light environment.

We told the other two helos on the far side of the field about the current weather, and they decided to take off single-ship and contact Approach once airborne. Meanwhile, our section decided to maintain section integrity and proceed up the river that runs by our home NAS. At the time, I felt our decision was valid because of the one-half-mile visibility, the 250-foot ceiling that was our normal altitude with NVGs, and our familiarity with the proposed route home. As we planned prior to takeoff, we worked our way up the river with my aircraft trailing the lead by about five rotor widths. Not to be fooled a second time, I frequently looked out from under my NVGs to confirm the actual weather conditions.

"Wires! Wires! Wires!" The call echoed through the cockpit. I immediately looked for the lead helo making an evasive maneuver and disappearing into the fog. The other pilot and me frantically searched for the wires as we gradually climbed. As I saw the wires directly ahead of us, I called, "Pull up! Pull up!" and grabbed the cyclic as the aircraft pitched up and over the wires. We were now in the goo, unaware of where our lead was, and still trying to get our hearts to work again. We asked the lead to put his rotator on, and located him. We noticed lights at our 1 o'clock position and set out for them, hoping we could orient ourselves. As we approached the lights, we saw an empty field, which was the perfect place to regroup and figure out how to get home without making the front page news.

We decided that the first two aircraft that had left the OLF had the right idea to start with, and took off from the empty field one at a time. We contacted NAS Approach for radar vectors to a GCA. After dialing in the squawk and hearing "Radar contact," I felt a little more at ease. For the first time, I heard the aircrewman in the back saying something about "signing my page 2," Record of Emergency Data.

The debrief was very quiet except for the frequent heavy sighs of relief. The following lessons were learned:

— A review of the squadron SOP revealed that use of NVGs in forecast areas of fog or precipitation was not authorized.

— While using NVGs, moisture in the air such as fog or light precipitation, can be identified by the "rainbow effect," which surrounds the center of any light source.

— Total recall of an area cannot be expected of any crew, thus the purpose of Hazard Maps.

— Although a can-do attitude is admirable, it must be measured against NATOPS, SOP and equipment operating limits. ◄

Lt. Doak is the aviation safety officer for NAS New Orleans.

Nobody Asked Me, But. . .

By Lt. Tom Baranek

WE are ending an arduous cruise, back from the sweltering heat and humidity of the I.O. Back from the ever-present tight rope of naval aviation, the one that stretches from stark terror to sheer boredom. Back from over 75 straight days at sea. You'd think that we had it made, just a few days out from those ice-cold San Miguels. There was still one danger that we seemed to carry everywhere we went. There seemed to be no way of eluding it, as though it were a dark cloud hovering over the CV.

In fact, it did hover right over the ship. It was the tanking pattern.

CV NATOPS has been written and rewritten to keep the danger of flying around the boat to a minimum. Every pilot and NFO must be acutely aware of tanker operations and procedures as spelled out in Chapter 5. Each air wing should have an up-to-date TACPRO that spells out the particulars for the air wing. Each pilot must fly the pattern as designed and never assume the other guy has sight. Nothing new, right? You've heard it before. The problem arises when we act like no one has ever read any of these publications.

Some of the most common mistakes have been made under the guise of expediency. You have been looking for your tanker for 10 minutes, only to find that it was sour. The tanker king said that there was a sweet tanker 2,000 feet below you. You looked down and, there he was, right below you. If you had gone outside the tanker pattern to descend, you risked losing sight of him. If you descended right there, you risked the lives of yourself, your crew, the tanker and the customer directly below you whom you did not see because you were so boresighted on your own tanker.

Another problem was when you came off departure and hit the tanker with too many angles (How about 180 out?). You knew he was in a gentle angle of bank, and soon you would be plugging for those few thousand pounds of precious juice. You tapped the burners and reeled the nose around. In seconds you completely negated the less-than-stellar tanker rendezvous. You were a little acute, and you hawked the basket for an S.H. swish. What about your wingman who was in the right position? He was padlocked on the same spot in the sky. What happened when two objects tried to occupy the same space?

It was only a receiver problem. It was difficult going around a 5nm radius circle, never getting tanked because the tanker was out at 8 to 10 miles. As a flight lead or a concerned pilot, it was important to debrief the entire flight, including the tanking, to ensure that everyone in the flight and in the air wing was thinking the same pattern. If you led your flight outside the designated safe tanking zone or changed altitudes inside that sacred area, it would be only a matter of time until that black cloud known as the tanker circle rained down on your party.

During your next air wing safety stand-down, how about inviting one of the CAG staff to brief all the squadrons on CV NATOPS and air wing TACPROs, and to discuss how the tanker pattern can be modified and made safer? After all, the JOs have all the answers to the problems of the Navy — if anyone would just listen. ◄

Lt. Baranek is RIO training officer with VF-213, an F-14 squadron at NAS Miramar, Calif.

"If the 4790-recommended inspection had been completed, the defective component would have been identified, thus preventing the mishap."

The Last Step

By LCdr. Robert Merritt

A FEW years ago, while performing a post-maintenance check flight (PMCF), my CH-53E instantaneously lost tail-rotor drive. Though surviving this mishap made me somewhat of an instant expert in this flight regime, it was an experience I would have gladly foregone.

The aircraft remained relatively intact; the incident ended as a Class A, but repairable. Crew injuries were limited to a cut elbow. The mishap investigation revealed no aircrew error, no NATOPS or SOP violations. The board found the mishap was caused by catastrophic failure of a major tail-rotor-drive component. If a 4790-recommended inspection had been completed, the defective component could have been identified, thus preventing the mishap. The lesson? A need for an attitude I call "the last step."

OPNAVINST 4790.2D maintenance has evolved with the primary goal of eliminating maintenance-personnel error from mishap causal factors. This process has not always resulted in the quickest or easiest maintenance, but when strictly followed, it does result in the safest. Following the 4790 achieves the safest possible maintenance by segmenting the maintenance process into a chain of actions, checks and rechecks.

In safety-of-flight items, the last of the required checks is the post-maintenance check flight. Too often, this step is not viewed as part of the maintenance process at all, but rather as just another hop that operations wants to get out before sunset, or, even worse, as a "test and go." A PMCF often loses its maintenance complexion and becomes an operational requirement. How many times have you heard, "The aircraft has to be up for Monday's schedule." The maintenance officer trains, qualifies and administers the pilot and aircraft PMCF program. It is not difficult to recognize that 4790 intends the PMCF to be an integral part of aircraft maintenance.

I made the mistake of not treating my PMCF with the right attitude. I did not treat it as the last chance to ensure the aircraft was safe for the next crew, much less myself. Sure, I reviewed the discrepancy book, and thoroughly briefed my copilot and crew. However, each time I briefed, "*All* we have to do is a full functional check flight. All it needs is a D item test (controllability), or an E item test (engine check)." These words indicate that we were probably not approaching the job at hand with the attitude that might have allowed me to detect that missed inspection. I allowed an old enemy — complacency — to slip in the back door, relaxing and altering my attitude.

Most of us recognize that the PMCF requires a different, nonoperational approach. Statistics may not seem to support this notion: Only 10 percent of all mishaps have maintenance error identified as a causal factor. That means maintenance personnel are doing a great job. However, if we look closer at only mishaps that occur during PMCFs, we find that maintenance error is a causal factor more than half the time. It is clear that when flying a PMCF, I had better realize my neck is now on the line in the last step of a long, sometimes convoluted, maintenance chain, and make sure I have the proper attitude and approach.

All PMCF aircrews should ask themselves all the obvious questions. What has maintenance worked on? Have the appropriate inspections been completed? What area of the aircraft should I pay extra attention to on preflight? Which emergencies should I emphasize in the brief? What should I look for on turn-up? And, of course, am I approaching this flight with the right attitude, regardless of operational pressures?

The Navy spends lots of man-hours and money on safety stand-downs, NAMTRADET and FASOTRAGRU training course, teaching the right attitude with which to approach specific jobs. In the case of PMCFs, the proper pilot attitude is "the last step attitude." Whatever *you* call it, make sure you use it and give the last step a chance to work. ◄

LCdr. Merritt is an instructor with HM-12, the H-53 FRS. He is the squadron safety officer.

"You Practice Like You Play"

By Ltjg. R. Dana Bartlett

"ATO, ATACO."

"Got you loud and clear."

"Roger, green over green, and NAV SYNC looks good."

"Rog, I've a good skin on him up here, copy my track?"

The SH-60B's datalink has got to be the greatest boost to LAMPS since the introduction of shipboard VCRs. The two-way tactical information flow and the ability to converse in plain language really reduces the strain on the ol' rotor head. We'd picked up a hotseat and were headed out to follow up on a few things passed down from the previous crew. "Ivan" was doing something out of the ordinary, and we were tasked to keep an eye on him.

"Sir, you've got two unknowns here," the ATACO called as the tracks came up on the multipurpose display (MPD) screen.

"Roger ATACO, I copy your symbols, we'll catch them on the way out. Also, you've got two dhows here, bearing 030 at 19.2 from you, headed west."

"Roger, copy your pointer."

"Senso, you're cleared to open the door. Get the gun and gyro-stabs (gyro-stabilized binoculars) ready, and make sure the ALE-39 and ALQ-144 are up."

"Roger, sir. I'm ready to go. After takeoff checks complete."

The crewman slid open the cargo door, revealing the large American flag we had painted on the cabin deck, and I started humming "Flight of the Valkyries" over the ICS. We'd been in the Strait of Hormuz Eastern Patrol Area for about two months, and our crew coordination was well choreographed.

It hadn't happened by accident. In the early days of the det, we had constantly trained and flown together on nearly every type of training mission we could devise: ASW, ASST, SAR, coordinated Ops. We'd actively participated in gun shoots, swept channel exercises, man overboard drills and mine countermeasure procedures. We'd flown in every type of weather and sea state, both day and night, been embarked in two different type of ships, neither of which had operated with an embarked det before. Our H2Ps handled most of the LSO duties, and we had used every flight deck evolution to make sure the SWOs knew exactly how we operated and how the ship and det could best work together. Just the night before, we had conducted a day-night rast landing qualification (RLQ) period, despite the fact we had flown nearly every day for a month. You can't get too much practice at small deck landings, and banging out a quick series of landings attached to the wire (yo-yos) is a good refresher for anyone.

"I've got a visual on this minesweep, and things look pretty normal. It looks like he's headed back to the 'Bear Box.'"

"Roger, Sir. Be advised we've detected a C-130 coming out of the Strait, headed south toward you."

"Roger, I've got him on the screen. . .OK, I've got a visual on him. He's low and slow, looking at our friends."

As we rolled in on his "six" to eyeball things, the guy started circling the 'Box' at close range. Typically, the increasing radio chatter began to dominate the cockpit.

"ATO, ATACO. Charlie Oscar says to clear the C-130."

No problem. Not wanting to get caught in the middle of anything, we bustered off axis.

"Any station, any station, this is 'Oiler,' 'Oiler.' Radio check, radio check. Can I talk to your legal officer?"

Please, guy! After all, this is a tactical net. Something foreign blasted forth on channel 16, Bridge-to-Bridge ("got a northbound lookin' for a south bound," etc.). The ATO's eagle eyes were in constant motion.

"ATO, ATACO, Ah, he's headed your way now. He might be inbound homeplate."

I pulled power to gain altitude "Damn!" There was a loud bang followed by a yaw to the right, and a shrieking, high pitched whine. Instinctively, I flipped on contingency power, and lowered the collective to preserve Nr. Passing 300 feet my eyes darted across the Seahawk's LED displays. A group of red cubes said that No. 2 TGT was scorching. Although Ng showed the engine was still turning, there was no indicated Tq. With my quick concurrence, the ATO pulled No. 2 PCL back to IDLE, but TGT remained high. Attempts to clear the compressor stall were futile as no Tq was being generated with TGT pushing 900C, so No. 2 was secured. I had no desire to broadcast my predicament to the neighbors over guard, so as the ATO reached for the checklist, I turned toward homeplate and keyed the data link.

"ATACO, Pilot, I've got an emergency. We need flight quarters now! I'm inbound for a single-engine landing."

Back on the ship, the off-going crew had their lunch interrupted by the IMC: "Emergency Flight Quarters! Expedite manning!" Poor timing, the cheeseburgers have just been served. With a few hand motions and grunts from food-stuffed faces, the wardroom scattered with det and ship personnel rushing to man the LSO shack, bridge and CIC. In the passageways it looked like a real-life GQ. The crew on our ship was an extremely well-trained bunch, and they took their jobs seriously.

"We're closing him at flank speed. With true winds at 347, we'll come left 30 degrees when he gets here, giving him 40 knots of wind on the nose."

In CIC things were a little more tense. A potential air threat inbound (the second one that morning) and his LAMPS

I pulled power to gain altitude. There was a loud bang followed by a yaw to the right, and a shrieking, high-pitched whine. Instinctively, I flipped on contingency power, and lowered the collective to preserve Nr.

flying around simulating a P-3 on station left the skipper wishing Wilbur and Orville had stuck to bicycles. In the shack, the LSO jumped on the link, and in his best maintenance officer voice, asked what I had done to his aircraft.

Back upstairs, the ATO read me the checklist for single-engine flight and recovery. Trying to cover all bases, we backed ourselves up with the Immediate Landing and Ditching checklists, ruled out a restart and considered our fuel. We'd already dumped some fuel and decided to continue dumping down to minimum on downwind. Power checks reminded us that it was hot outside, but the numbers indicated our prospects were good for a safe recovery.

"C-130, this is U.S. Naval Warship."

"Well, guard works 4.0. Could you turn it down, ATO? Hey Senso, you ready for this?"

"Yes, Sir."

With 30 miles to go, the ATO looked down at the screen.

"ATACO, we're 23 minutes out, and, ah, we still have the C-130. Do you want us to track him?"

"The ducting is lousy, sir; we'd appreciate your help."

We were back in business. It suddenly occurred to me that our training had paid off. When I first checked into the squadron, our skipper had said: "I don't just want you to be good enough to handle every emergency, I want you to be good enough to handle every situation while fighting this weapon system!"

We had accepted his challenge. From a practical standpoint, it's the responsibility of the LAMPS detachment to ensure that NATOPS, NWP-42 and their shipboard emergency procedures are pre-briefed and well-rehearsed. All of those taxing week-one-work-ups, all of the hot sweaty flight deck drills at Gitmo, all of the "fright night" RLQs with the nuggets, the briefs, the in-house lectures, the AOMs on flight ops, guest tours of the LSO shack, and the "at sea" simulator scenarios (conveniently scheduled for late night or right in the middle of the Det Readiness Inspection) were for a reason. We had put ourselves to the test, and were confident of our decisions and the skill of the ship's crew.

"LSO, Pilot. I'm three minutes out. Go ahead and start your turn. Tell me when my tail crosses the flight deck."

"Roger, the RSD is inside, this will be a clear deck recovery."

"Concur, landing checks complete, switching uniform."

The ATO rebriefed the single-engine landing checklist, and with the C-130 outbound, but still a factor, we dumped fuel to minimum. As the ship steadied up, we flew a steep, straight-in approach to a no-hover landing. At that gross weight the Seahawk flew like a dream, even in the 100-degree-plus heat. As soon as we touched down the chock runners bolted out.

"444, LSO, nicely done."

"Thanks."

"444, Tower, you want a yo-yo?"

This article was written by Ltjg. R. Dana Bartlett (Det Admin O) as told to him by the aircrew of Magnum 444; LCdr. Lee Davis, HAC; Lt. Jim Hirst, ATO; and AW2 Harold Brown, Sensor Operator. HSL-444 Det 8 was deployed in USS *Spruance*, (DD-963) operating in the Gulf of Oman, near the Persian Gulf and the Strait of Hormuz.

The TC-4C: 20 Years of Mishap-Free Flying

By Peter Mersky

GRUMMAN'S veteran A-6 Intruder recently observed its 25th anniversary. Another Grumman aircraft, one closely linked to the Intruder, also notes an important milestone this year. The twin-engine turboprop TC-4C Academe, better known as the "TIC," began training A-6 flight crews in 1968, and by the end of June 1988, began its third decade, with a total of 34,400 mishap-free flight hours in Navy service.

The TC-4C is a modified Gulfstream I, which first flew in 1958, as a Grumman venture into the burgeoning area of general aviation transports. Powered by British Rolls-Royce Darts, the G-159 found a ready international market. The Navy ordered nine G-1s in 1964, but the aircraft were deleted from the budget. They were reordered in 1966. The Coast Guard also wanted the G-1, which they designated C-4B to replace their ageing Martin 404 personnel transports. The Navy designation for the Grumman twin was to be T-41; however, the Air

Force had obtained that number for its *ab initio* trainer version of Cessna's C-172 four-place, single-engine light aircraft. The Navy decided on the TC-4C designation.

Two Navy squadrons, VA-42 and VA-128, the east and west coast A-6 FRSs, respectively, and VMAT(AW)-202, the Marine A-6 FRS, flew the TC-4C. Now, all Marine flight crews go through training at VA-128, while Marine ground crews attend FRAMP at VA-42 and VA-128. This increased training required all remaining eight TICs to be assigned to the two Navy training squadrons.

Training hundreds of Navy and Marine flight crews, flying over 1,700 hours each year in each squadron, the TICs certainly earn their keep. The G-1 has one of the safest flying records. Of the 200 aircraft built, only five have suffered crashes.

While the Navy version of the G-1 is essentially the same as its civilian brother, it sports a typically stripped-down interior. Originally, the TIC contained repeater stations for the main radar in the extreme rear portion of the fuselage. However, since today's training missions are flown with no more than two students, the repeaters have been discarded. Sound-proofing has also been improved, relieving the need for the flight helmets which were worn in the beginning of the plane's career.

Lt. Mike Glynn is VA-42's NATOPS officer and the model manager for the TC-4C. Like most of the squadron's nine TIC pilots, he has a heavy turboprop background, having flown P-3s with VP-22 at NAS Barbers Point, Hawaii.

"The TIC is a very reliable aircraft," he says, "but our safety record comes from the combined effort of our maintenance department and the high experience level of our instructor pilots, most of whom were instructors elsewhere in the Navy."

"Although it's a solid aircraft, the TC-4 can be a difficult aircraft to fly," Lt. Glynn continues, "because of its British engines. Everything works in reverse of what American aviators are taught. It even trims 'backwards.' "

By today's standards, the TIC is a less sophisticated aircraft and lacks any hydraulic assist. It is definitely an 1950-era machine. But, even without more modern conveniences, the TIC continues to train A-6 crews.

Missions are divided into two phases: navigation, and systems and weapons. The first phase takes the student pilot and B/N through point-to-point navigation at 4-8,000 feet. They become familiar with the Intruder's radar, which is mounted in the TIC's huge, bulbous nose. This phases consists of six syllabus hops, and one check ride.

The weapons phase — three hops and one check ride —includes modified weapons delivery and bombing specific targets.

Besides regular syllabus missions, the TC-4C has extra duty as a squadron maintenance transport, and on occasion, a SAR platform. Every six weeks, VA-42 sends a TIC to NAS Patuxent where a class at the Test Pilot School evaluates the A-6 radar as part of their graduation exercise.

As one VA-42 TIC pilot commented, "The TC-4C is a training tool that cannot be duplicated by a WST." Noting the new attack aircraft programs such as the A-12, he was concerned that there was no aircraft similiar to the TC-4C under consideration for the new attack aircraft.

"A ground trainer can't duplicate the day-to-day difference in the weather and air. It can't train the flight crews to be right the first time, without the luxury of 'stopping' the trainer and going over the problem again. In the TIC, the flight crews learn to be *right* the first time, right on target, just like they need to be on a real mission in an A-6."

With its noteworthy record, the TC-4C will continue to fly in support of the A-6 squadrons. Rear Admiral James E. Taylor, then-Commander Fighter Medium Attack Airborne Early Warning Wings, Atlantic, recently congratulated VA-42 on their safety milestone. He said, "Thousands of safe flight hours reflect a positive command emphasis, attention to detail and the team spirit of every member . . ." ◄

We Can Do It In Our Sleep

By Lt. Jeffrey A. Hesterman

IT was a typical AUTEC (Atlantic Undersea Test and Evaluation Center) Det. Following an uneventful flight to the facility, we performed the required aircraft maintenance and headed to the local watering hole. The next days flight was to be a standard ASW mission, including a torpedo launch, against a real submarine. This event would surely be nothing new for a seasoned, fleet-experienced crew. After all, we had done it so many times that we could do it in our sleep.

Since we had been flying together for almost eight months, we all felt we knew what each other would do, so the brief consisted of "same crew; same brief." With that done and a quick look at the aircraft discrepancy book, we walked out to the aircraft. The ordnancemen pointed out the torpedoes to us and said that everything was ready for our mission. Fifteen minutes later, we were airborne and headed for a rendezvous with our intended victim.

My copilot started to set up the tactics computer. En route, the aircraft was too heavy to hover, so we decided to dump some fuel to reduce weight. Ten minutes later, the event started. We gained contact on the sub immediately and maneuvered the aircraft to get in position for an attack. We asked for permission to attack from the test conductor, and he asked us for information on one of the two torpedoes that we carried. We fumbled around for a few minutes until we found a card buried in my helmet bag that contained the required information. We gave the test conductor the information, but by this time the contact was too far away to shoot. During the next "dip," we again had attack criteria, so we hurried through the weapons checklist. The contact was again out of range to shoot. Finally, on the next dip, we were ready to shoot.

"We'll launch on my third 'now' I said. "Now, now, now." The sonar operator reported that he did not hear the weapon running. We looked out the window and saw that it was still on the aircraft. "Did you push the button?" I asked. "No," my copilot replied, "I thought you were going to push it!" I did, and the weapon launched as programmed.

The sonar operator said, "It's still not running!" We looked down at the armament panel and noticed that one switch had been missed during the checklist; the weapon would sink to the bottom and implode. That was one less torpedo to be recovered and used again for training. We were getting ready to attack the target again when we noticed that our fuel was running too low to conduct the attack and make it back to base. If we had only waited 10 extra minutes before we had dumped fuel, we would have been able to get this last weapon off.

As we headed back to base, I couldn't help thinking of all the harassment that I would receive from my fellow pilots when I returned, to say nothing of what the CO would say.

I woke up in a cold sweat. What a nightmare I thought. Had I really made all those mistakes? No — it was only a dream.

The brief went smooth; we discussed all of the possible situations that could take place. NATOPS procedures and tactical procedures. Yes, we even discussed who would push the button. We walked out to the aircraft and did a thorough preflight including the weapons that were loaded; information was verified. During the aircraft turnup, we set up our computer so that we would be ready as soon as the exercise started. Immediately after takeoff, we conducted the weapons checklist to ensure that everything was ready to launch. If there were any problems, we wanted to know now so that we could return to base and get them fixed; everything checked out OK.

We headed out onto the range and gave the test conductor the weapons information so that we wouldn't have to take up valuable time later. We arrived on range a little early, so we double-checked that we had performed the weapons checklist correctly. When the exercise started, we dumped some fuel to reduce weight. We started our search plan just as we had briefed and gained contact. We received authorization to shoot, but the target had moved too far away. We repositioned and gained contact again. This time, we launched the weapon, and it ran after the target. One successful attack, but we still have one more to go.

As we transited to our next dip position, a quick check of the gauges revealed that we had enough fuel to complete the mission. During the next dip, we again gained contact and made another successful attack. We were able to go home knowing that we had done the best possible job.

Lt. Hesterman is the tactics officer for COMHSWING ONE, and a flight instructor for HS-1 at NAS Jacksonville, Fla.

Singling Up,

or What Your Mother Never Told You About Multi-engine Helicopters

By Cdr. John B. Manly, Jr.

"SINGLING up" is not just an OOD command before getting underway. It refers to the conscious securing of a good engine in flight. For most helo aviators — and you stiff-winged folks, too — the thought of intentionally shutting down a good engine in flight ranks right up there with smashing your thumb with a large hammer or purposely stepping in front of a speeding train. P-3 crews loitering on-station with secured engines are the exception. For most of us, though, it's the most unnatural thing we can contemplate.

However, there are situations where singling up may become — gulp! — a necessity. I found this out one night some years ago over the South China Sea.

The SH-2F NATOPS and, I suspect, all the other twin-engine helo NATOPS manuals do not spend much time on single-engine flight except in the performance charts. That's probably as it should be. The reasons for securing a good engine are very few. In fact, the only one that immediately comes to mind is when you need to extend your range or endurance to "splash."

You know the scenarios: a bad radar vector, loss of fuel transfer, a changed PIM (position and intended movement) without the courtesy of an advisory or a sour HIFR (helicopter in-flight refueling), leaving you a long way from home. Add to all these independent hops with no other good guys around, and the devil starts to loom larger in the picture. I lost fuel transfer while on SURVOPS and chose not to activate the manual diverter (read "flame out") valve to transfer fuel. Fortunately, these all-too-common "gotchas" are usually corrected before we really get into trouble.

The SH-2F NATOPS says that if the decision is made to secure an engine, it should be done immediately to achieve the maximum benefit. Keeping most helo engines at idle will not really help save gas. Check your charts. If you single up, you will lose airspeed, you will probably have to consider your altitude, and you will face limits on gross weight and max torque. But, in general, if you're already in extremis, you just might be able to make it back, or at least ditch closer to the ship.

If you ever have to commit such an unnatural act, and have made it back overhead homeplate, you now have an engine relight to accomplish. Don't expect a textbook relight; it may not happen. Ours never did relight after two by-the-book attempts. Use the quieter single-engine transit to thoroughly brief single-engine landing procedures. I didn't, thinking the engine would relight easily, just like the battery starts we'd done many times before.

Finally, don't expect the flight deck to give you the same visual cues for a single-engine approach (especially at night) that you had during your last practice session ashore. Forewarned is forearmed. Singling up is not for everyone. Ideally, you'll never need it. It's only one trick in a mixed bag that you might need when your worst dreams become a reality.

Talk to the "old guard" who have the corporate knowledge, and don't forget the engine tech reps. Ask the questions that need asking. I didn't and I wish I had. Has anyone ever used emergency fuel transfer systems? Has anyone ever tried a relight in flight? What does the shipboard single-engine landing profile look like at night? All the answers, and more, are probably in your ready room.

Discussing intentional single-engine flight may be considered irresponsible and heretical; nevertheless, the topic should be resurrected periodically if, for no other reason than to learn more about aircraft capabilities and limitations. And we all know what Dirty Harry says: "A man's gotta know his limitations."

This is an excellent and timely article. Look for an upcoming NATOPS change concerning this situation. — Lt. Scott Campbell, H-2/SH-60 analyst, Naval Safety Center.

Cdr. Manly is a plankowner of HSL-37, and completed two tours with the Easy Riders. During his second tour, he served as Det 10's OINC for a WESTPAC cruise in USS *Cushing* (DD-985). He is currently at PMTC Pt. Mugu, serving as a UC-12B pilot and executive assistant to the weapons support director.

. . . Suddenly out of the corner of my eye to the right, a large white object filled the windscreen. There was an incredible swoosh! Our helicopter pitched and shuddered. We were flying through the wake of an unidentifiable flying object . . .

"They would have seen

By Lt. Thomas P. Poff

I WAS the junior pilot flying right seat in a flight of two SH-3H helicopters. We were assigned to a night ASW free-lance screening operation aboard a carrier deployed on RIMPAC. It was one of those varsity dark nights: overcast, no moon, no horizon. Visibility was good, and you could see the ship's lights twinkling in the distance.

We launched about 40 minutes before our playmate and did not brief with them. Both helicopters were holding a loose starboard delta pattern. It was the same routine we've been doing for weeks. The skipper decided to darken ship. No big deal, that was routine, too.

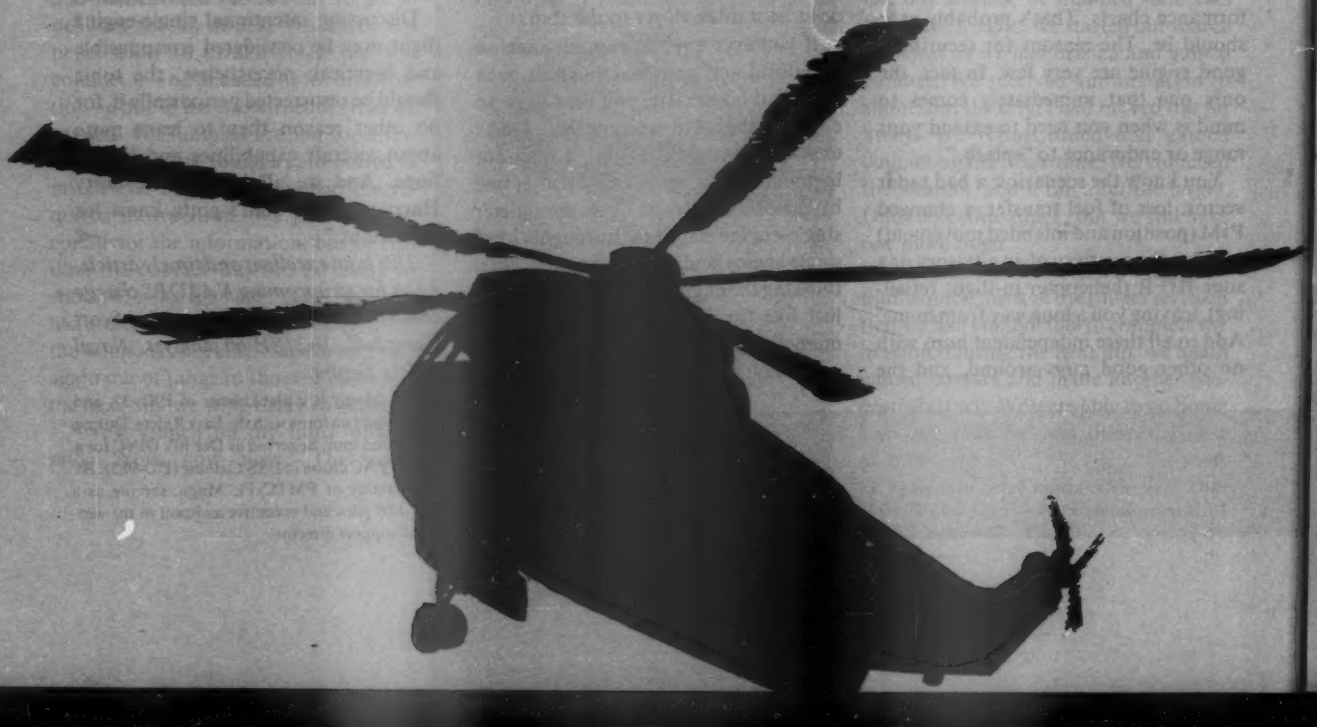
As we watched the ship's lights disappear into the black night, I suddenly saw our playmate's lights go out, too. Incredibly, they turned their lights out to help mask the ship. That wasn't routine!

Now, we had no idea where they were, except for the fact we were sharing the same airspace and altitude. My first thought was, "My God, don't they know we're up here, too?

I wanted to come on the UHF and recommend they turn their lights back on immediately. But they were a senior crew, and I certainly did not want to cause a scene or embarrass anyone over the radio. Since they were senior, maybe they knew what they were doing. Maybe they kept an eye on us since our lights were on. Maybe they would maintain safe separation. And just maybe we would be lucky enough not to run into them up here in the dark.

I asked the helicopter aircraft commander (HAC) to politely remind them of our presence. Surprisingly, he did not seem too concerned. We were EMCON. Everybody was practicing strict radio discipline, and we didn't want to be the first ones to break radio silence. A decision was made to drop behind the carrier a few miles and conduct our screening operations there, just to play it safe.

At this point, an old phrase that I learned in childhood



us; our lights are on!"

popped into my head: "Discretion is the better part of valor." I didn't know where it came from or who first said it. It was one of those phrases my parents taught me as a boy, and somehow it seemed to apply.

I thought, "Were we being discreet by not embarrassing the other crew over the radio? Was there any valor in allowing another aircraft to share the same airspace at night with no lights on for the sake of practicing stealth?"

We flew off in the direction of the ship's wake hoping our playmate would switch his lights on before recovery time, and for a minute I mulled over that strange phrase, but I soon discarded it because more important tasks were at hand.

The flight progressed normally for the next hour and a half, and I mentally placed the darkened helicopter in a nagging corner in the back of my mind. Toward the end of our cycle, we decided to return to starboard delta for the recovery. We set a course for the carrier and started looking for the other helicopter, hoping its lights were back on. We approached to about a half-mile behind the ship.

Suddenly out of the corner of my eye to the right, a large white object filled the windscreen. There was an incredible whoosh! Our helicopter pitched and shuddered. We were flying through the wake of an unidentifiable flying object. It seemed to blow directly through us from right to left.

"What was that?" the HAC blurted out.

As I struggled to maintain control of our bouncing aircraft, I exclaimed, "It was the other helicopter!" I saw it from the reflection of our own running lights. He didn't recognize what had just happened.

"Nah, it couldn't be," the HAC said. "They would have seen us. Our lights are on!"

Five seconds later off to the left, our playmate's lights flashed on. The HAC stared out the window for a second, then popped back to attention. Both aircraft seemed to be flying normally. We were still airborne. No harm was done.

Keeping a watchful eye on each other, both aircraft entered starboard delta. We were careful to keep 180 degrees separation in the pattern. The recovery was normal. There was no mention of the incident on the air.

Later in the wardroom, we got together with the other crew and discussed what happened. The looks on their faces reflected our own feelings. It was a close encounter. The other crew had not seen us until it was too late to react. Our angle of approach had presented a minimum visual profile to them even though we had all our anti-collision and running lights on. The pilot flying left seat in the other aircraft had his head in the cockpit working a TACNAV problem until seconds before the near miss. We discussed the situation until satisfied we had defined the problem and decided upon a solution.

It didn't really hit me until the next day. I realized how lucky we were to be alive and what a close call we had had. No near-miss report was filed, but at the next all-officers meeting, we had a brief on helicopter conduct during darken-ship procedures. It was agreed that helicopters would maintain their lights on at all times. It was also agreed that in a peacetime environment, radio silence would be broken regardless of EMCON condition when a concern for safety existed.

On that night the difference between life and death had been no more than a second away. If I had it to do over again, I would have spoken up and risked embarrassment no matter who was in the other cockpit. Again that phrase, "Discretion is the better part of valor," popped up. The question I had that night about being discreet over the radio shrank in comparison to the question of the safety of two helicopters and the lives of eight crew members. It would have been difficult to explain how and why two helicopters flew into each other that night, given the extensive training and safety precautions built into helicopter carrier operations. This is especially true since it is likely no one but the members of that flight of two knew that the lights were out on one.

If you find yourself in a dangerous situation or you see others make a decision that puts your aircraft or crew at risk, don't hesitate to speak up. It is no longer a question of being discreet.

Lt. Poff is NATOPS officer at the Pacific Missile Range Facility, Barking Sands, Hawarea, Kekaha, Hawaii.

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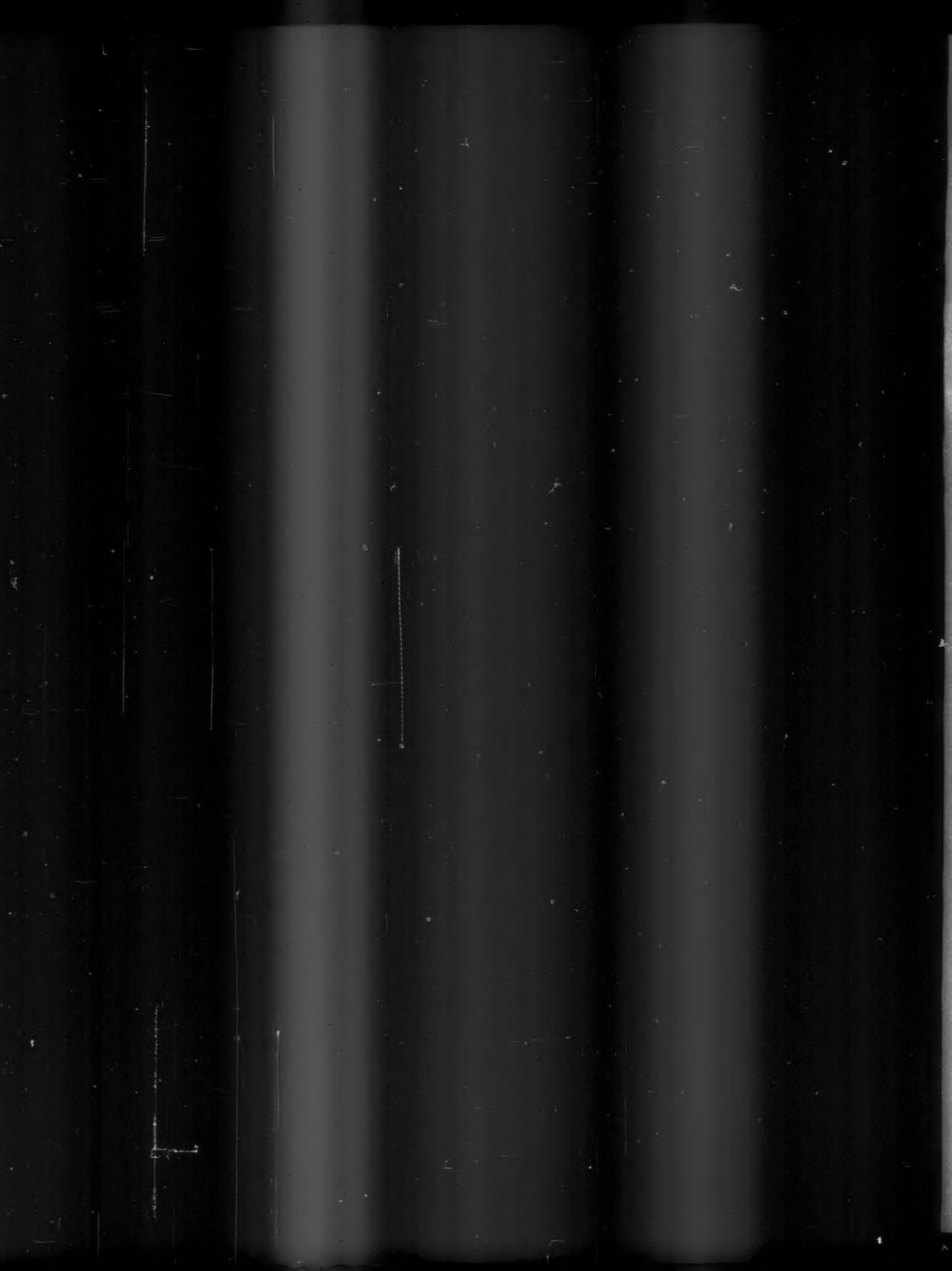


The Bus Driver Syndrome

By Lt. Dick Holloway

THE scene was an East Coast VP deployment site. The mission was a standard operational ASW flight, 11 hours long. The aircraft was off on time, and our crew was happily anticipating some first class on-top time. We were led by a highly qualified, first-tour patrol plane commander (PPC), and a newly qualified, first-tour tactical action officer (TACCO) with an excellent reputation.

Unfortunately, it turned out to be one of those flights that doesn't quite develop as planned. The sonybuoy pattern was in the water, and there were plenty of "sniffs"; but every time we tried to pin one down, the ocean turned quiet. The TACCO, along with the rest of the crew, was growing a little impatient and short-tempered as the night dragged on. The PPC hit the rack, and the second pilot took over. The TACCO walked back to Sensor Station One.

Suddenly, the TACCO came to life, calling over the ICS: "Flight, TC. Head for LOFAR 26 now!"

"Roger TACCO, what have we got, anyway?"

"Hey, Flight, just drive the bus, OK?"

"Just drive the bus." It's a phrase VP pilots hear from time to time, particularly if we've had the audacity to show a little interest in tactics, overwater NAV, Data Link and other "back-of-the-bus" magic. We're expected to go where we're told, or hit the next fly-to-point, without asking questions or wondering exactly what's going on.

Unfortunately, too many of us have docilely — perhaps lazily — accepted this approach and become professional autopilot monitors whose sole purpose is to take off and land, allowing "George" to perform all the en route functions. The TACCO, navigator or approach controller tells us where to go. We point "George" in that direction, and sit back with our coffee, watching the scope and talking about the stock market.

The point to be made here is *not* that VP multiengine pilots should attempt to become one-man crews. Many of us have known mission commanders who tried to run the flight station, the TACCO scope and the sensor stations all by themselves. This type of person can become a terribly disruptive influence on the crew.

Nevertheless, there is a happy medium to be reached, a point where the professional crew can work together, trusting each other yet always backing one another up. For the people in the cockpit, that point surely lies somewhere between being bus drivers and being one-man crews.

As of October 1987, there have been 29 strike damage mishaps during the P-3's 24-year history.

In many cases the exact cause remains undetermined, but in the following examples, one might suspect the bus driver syndrome of being at least a contributing factor.

WESTPAC, 1968: A P-3 returning from an ASW mission checked in with approach control at FL 200, 100 miles out. The aircraft was cleared to 9,000 feet, which was also the Minimum En route Altitude (MEA). At 50 DME the aircraft was cleared to 5,000 feet, although the MEA was still 9,000 feet. The aircraft impacted a mountain at the 5,700-foot level. Twelve fatalities.

Mediterranean, 1972: A P-3 received clearance to fly through a narrow strait at 1,000 feet. The weather was rapidly deteriorating with visibility decreasing. The aircraft impacted a 734-foot mountain at the 440-foot level. Investigation revealed that not all available navaids were being utilized. Fourteen fatalities.

East Atlantic, 1977: A P-3 on a surveillance mission, in poor weather, struck a 5,200-foot mountain at the 2,300-foot level. The mountain appeared on all navigation charts *except* for the ASWOC computer-generated area printout. There was a usable navaid nearby. Thirteen fatalities.

WESTPAC, 1983: A P-3 working coordinated Ops at night struck a mountain on an island a few miles away from the OP area. Available data indicates that the radar was off. There was a usable VORTAC on the island, 10 miles away. Fourteen fatalities.

The VP Navy is not the only community that occasionally falls prey to the bus driver syndrome. Every aviator has encountered a situation in which it was easier to blindly obey a navigator or a controller than to question a call or pull out a chart that is buried at the bottom of his flight bag.

Commercial airlines also have suffered tragedies attributed to the bus-driver syndrome. In the early '70s, a 727 en route to Dulles Airport was cleared to descend to an altitude below the local MEA. The aircraft struck a small mountain, resulting in the loss of all on board.

During the same decade, a DC-10 on a charter sight-seeing trip to the Antarctic apparently flew into a white-out and struck a mountain. Once again, all on board were lost, and once again the mountain was depicted on area navigation charts.

None of us can positively state the ultimate cause of these tragedies. However, it appears that careful back-up navigation from the cockpit might have averted these needless deaths. Proper use of charts, navaids and a questioning nature for directions by controllers and flight director systems might have saved a number of lives.

So here's the bottom line. Are you a pilot or a bus driver? Are you a plane commander or a chauffeur? Do you know what's between your aircraft and the next fly-to point? Do you know what's between you and the runway? If you qualify as a bus driver, I would strongly recommend that you re-examine your approach to aviation. Let's not trade in our gold wings for a chauffeur's license. ◄

Lt. Holloway is assigned to VP-30.

. . . We started our final approach and went down in the fog. I heard the copilot say 30 feet, and the next thing knew I was chest deep in water and rolling to the right . . .

It Won't Happen to Me

By AW2 Leonard L. Reed

WE were on a night flight in the central Med doing ASW. On our return to the ship, the reported visibility was about a half mile. After the first approach, I found out that the visibility was a lot worse than that. We flew three more approaches to the ship without seeing the flight deck.

Following the wave-off on the last approach, I saw the ship's flight deck lights through the layer of fog. The HAC tried to hover down to the ship as a last resort, considering our fuel state. We started our final approach and descended into the fog.

I heard the copilot say 30 feet, and the next thing I knew I was chest deep in water and rolling to the right. My first reaction was to go for the window next to me on my left. With the helo already in the water, I could not punch out the window.

Anxiously I went for my HEED (helicopter emergency egress device) bottle. First I took a good breath of air and then put the HEED bottle in my mouth. The helo completed its roll and was upside down. I found my reference point on the radar rack with my left hand and unstrapped from my seat. It took me a long time to convince myself that I could breathe. It seemed like my mind knew I could breathe, but my body said don't you dare. I finally exhaled and then took a breath. I realized I could breath underwater. It was very calming to know I could get a breath when I wanted to.

I continued my egress and felt my way out. Once outside, I went to the nose of the helo where I hooked up with one of the pilots. All of a sudden I realized just how cold the water was. We found out later it was 62 degrees Fahrenheit. The other pilot hooked up with us, and we started to signal our ship. Thirty minutes later we were out of the water and back on our ship.

If it weren't for my training, I might not have made it. The helo going into the water and rolling upside down was just what the 9D5 simulates and is exactly what happened to us. The helo dunker is very realistic. It gave me a good idea of what would happen when the aircraft rolled, especially at night.

When we impacted the water and rolled, I was very disoriented. If not for the reference point that my training had taught me to go for, I don't know if I would have made it out of the aircraft. The method of egressing hand-over-hand allowed me to keep a reference point, giving me an idea of where I was at all times.

HEED is the newest piece of our survival gear (Take HEED and Survive, Approach, July 1988). It is one of the best aviation life support systems the Navy has come up with, and I owe my life to it. I was under water for about 30 seconds. Without this valuable piece of equipment, I may not be here today to tell this story.

The training syllabus is still being developed, but the training I received at DWEST Jacksonville, Fla., was excellent. I would like to see this training go further and incorporate use of the HEED

Eight Lives Saved by HEED in Six Mishaps

Aircrew Saved	Date	Helicopter	Squadron
Copilot	8/27/87	HH-46A	HC-11
Crewman	"	"	"
Copilot	10/4/87	UH-1N	HMM-263
Crew Chief	10/22/87	HH-46A	HC-5
Pilot	11/9/87	SH-3H	HS-12
Crewman	5/8/88	SH-2F	HSL-36
Crewman	8/10/88	SH-2F	HSL-35
Crewman	"	"	"

bottle during 9D5 egress training. This would give the student more confidence in the use of HEED without hesitation during emergencies. I know that this is already simulated by using a chair at the shallow end of the training pool (shallow water egress trainer), but this is not enough. Being in an actual simulated helicopter like the 9D5 would give the student the most realistic training and confidence needed to best use his HEED bottle.

Our crew joined together after the mishap to be more visible to rescue aircraft and to help each other. It was important that we gave moral support to each other and believed that we would be rescued.

Understanding your survival gear and how it works is vital to your rescue. Since visibility was so low in our situation, flares were our primary signaling device. Be familiar with the MK-79 or the MK-13 MOD 0. Remember that the MK-13 needs to be held downwind and away from you at a slight tilt. The MK-79 should be held above your head and away from you. The empty cartridge has to be unscrewed before the next one can be fired. I found out the hard way.

A combination of all these things helped us survive. I'm grateful for the training received and the people who trained me. I have been flying in the SH-2F for more than five years. I had developed the attitude, "It won't happen to me." But it did happen, and all my water survival training paid off in a big way. It saved my life. ◄

AW2 Reed is an aircrewman on an SH-2F LAMPS Mk I sea-based ASW helicopter with HSL-36 at the Naval Air Facility, Mayport, Fla.

Any way you look at it, this is the number to call when you have a safety question that needs answering. It's a toll-free safety hot line available 24 hours a day for use in the continental U.S., Hawaii, Puerto Rico

ALAS-LOH-008-1

and the Virgin Islands. Anyone in the Virginia or the D.C. area should call Autovon 564-3520 or (804) 444-3520. So, don't stand on your head if there's a problem. Give us a call — we're here to help.

How Fast Do You Think This Car Will Go?

By Lt. R. Mahr

I WAS an S.H. junior officer — I flew the heavy iron, I drove the fast car. I could party all night and feel good in the morning. I didn't drink and drive. It was a rule I didn't break. I used to, but no more. Too many close calls, too many dead friends.

A friend and I were going out. We flipped for the driving. I won, he drove, I drank. He left his car at my house. We took mine. The new one. The fast one.

Just a couple of bars. We parked and walked between them. Shot some pool, drank some beers. My friend had a couple. I didn't keep count; I wasn't worried. He was driving and he was responsible. After all, I won the toss.

By the time we left I was legally drunk. I didn't need a breathalyzer to tell me that. But I wasn't driving. No problem.

We started back for my house. The road was long and straight. Two lanes, rolling hills. It was a little wet, and it was dark.

"How fast do you think this car will go?" I asked. "Go ahead, try it."

I was drunk, but I was the passenger. We passed the "stop ahead" sign doing over 80 mph. We passed the "stop" sign at well over 60 mph. We crossed the two-lane "T" intersection, ran over a street sign and shot the gap between a telephone pole and its guy wire. We went across 60 feet of sand, shedding parts of my car all the way. The brakes may have been locked, I don't know. I was busy trying to jump out of the car, but things were happening too fast. I couldn't get my seat belt unfastened.

We stopped less than 3 feet from a 200-foot cliff. Sheer drop, waves breaking on the rocks below, just like in the movies. All my friend could say was, "I wrecked your car. I'm sorry, I'll pay for it."

He was drunk. All I could do was stare at the cliff. I was scared. We managed to get the car started and drove what was left of it home. It took two months and $3,500 to put it back together. That's all: no cops, no red lights, no DWI, no funerals.

The next morning I walked back to the spot where we left the road. I walked past the telephone pole that we missed by inches. I stepped over the sign and part of my front bumper lying in the sand. I stood 3 feet from the edge and looked down. I have never been so scared in my life. I still am. All I have to do is think about it.

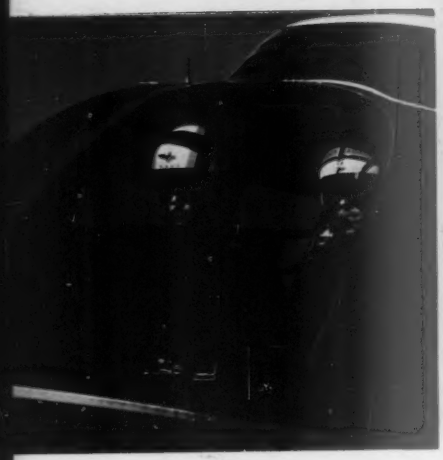
Now I've got another rule — don't ride with someone who has been drinking. I don't break it. I'm too scared. The ground has a Pk of 1, and that applies to the passenger as well as the pilot.

Lt. Mahr is the personnel officer attached to VA-95, homeported at NAS Whidbey Island, Wash.

The Fighting Aardvarks of VF-114, deployed in the USS *Enterprise* (CVN-65), recently operated in the Northern Pacific and Bering Sea. As the holiday season approaches, they decided to share a few of their lessons learned from that experience.

A Visit From St. No-Grade

'Twas the night before Christmas, and up in NorPac,
The ship pitched and heaved, as I rolled in my rack.
The Tomcats were chained by the fantail with care,
In hopes that some aircrew soon would be there.
I strolled to the head' cause I needed relief,
Then ran to the ready room — I was late for the brief.
The weather was dreadful, been raining all day,
"We probably won't launch in this crap anyway."
The TV brief ended, we went for our jet,
I tripped on the 2-wire, the flight deck was wet.
I strapped on my fighter, turned everything on,
It was then I discovered my flashlight was gone.
"Oh well, I won't need it, my RIO has his,
I wonder if he knows where our divert is?"
When up on the bow there arose such a clatter,
I stared out the cockpit to see what was the matter.
An airplane was launching into all of that "goo,"
"Surely that's something they won't make *me* do."
The ceilings were lowering in half-mile viz,
"I should have written down where the freezing level is!"
We shot off the cat and started our climb,
"I sure hope those wings don't get covered with rime."
Our mission was CAP, but what was our sector?
A little embarrassed, I asked for a vector.
On top and on station, we flew much too fast,
One hour later, I looked down at my gas.
Well under my ladder, my fighter heart sank,
We told them our fuel state, and they told us to tank.
When we plugged the A-7, we found out he was sour,
"We've got enough gas to stay airborne ONE hour."
As I started to pray to the good Lord above me,
The ship thought they'd try a Night Emcon Recovery.
"A night Emcon approach — well, it can't be that hard,"
I looked through my kneeboard, I'd forgotten *that* card.
"Approach, 101, we have to land, NOW."
Pull all those jets forward — get 'em up on the bow."
Inside of 10 miles, I was biting my lip,
And then I got *low* as I looked for the ship.
"101, Tomcat ball, with **Emergency** gas,
Oh, Lord, won't you help me get aboard on this pass?"
At the ramp I decided I wouldn't go higher,
So I pulled off some power, and grabbed the 1-wire.
Just prior to shutdown, my fuel low lights were bright,
I recounted the errors I'd made on that night.
Unprepared and complacent, we'd launched in NorPac,
It was only by luck that we found our way back.
So know your procedures when the plot gets too thick,
The only real expert up here is St. Nick.

AIRCREW COORDINATION

Aircrew coordination is a team effort resulting from eyeball-to-eyeball discussion of flight procedures.